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Fall 1992

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Borland C++ gives you everything you need for robust, sophisticated Windows programming. The Resource Workshop lets you visually create three-dimensional Windows resources such as buttons, icons, menus and more for your Windows applications. WinSight™ tracks Windows messages visually to make Windows debugging easier, and the help compiler enables you to make great Windows help files in a snap. WinSpector helps you trace UAEs. The Borland integrated resource compiler WINDOWS.H is also included for full Windows 3.0 and 3.1 support, including Multimedia, Pen, OLE, DLLs, DDE and MDL.

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Editorial Staff:

***Publisher,
Vice President-Marketing
Jeff Largiader***

***Marketing Production Supervisor
Jane Carling***

***Desktop Publishing Specialists
Margo Smith
Dana Warnock***

***Marketing Sales Supervisor
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***Graphic Designer
Lisa DiLillo***

***Illustrator
Greg Curry***

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Autodesk, Robert Wenig, Manager, AutoCAD for Windows:

"At Autodesk, we're using WATCOM C/386 in the development of strategic new products since it gives us a competitive edge through early access to new technologies. We also highly recommend WATCOM C/386 to third party AutoCAD add-on (ADS and ADI) developers."

Fox Software, David Fulton, President: "FoxPro 2.0 itself is written in WATCOM C, and takes advantage of its many superior features. Optimizing for either speed or compactness is not uncommon, but to accomplish both was quite remarkable."

GO, Robert Carr, Vice President of Software: "After looking at the 32-bit Intel 80x86 tools available in the industry, WATCOM C was the best choice. Key factors in our decision were performance, functionality, reliability and technical support."

IBM, John Soyryng, Director of OS/2 Software Developer Programs: "IBM and WATCOM are working together closely to integrate these compilers with the OS/2 2.0 Programmer's Workbench."

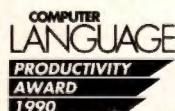
Lotus, David Reed, Chief Scientist and Vice President, Pen-Based Applications: "In new product development we're working with WATCOM C because of superior code optimization, responsive support, and timely delivery of technologies important to us like p-code and support for GO Corp's. PenPoint."

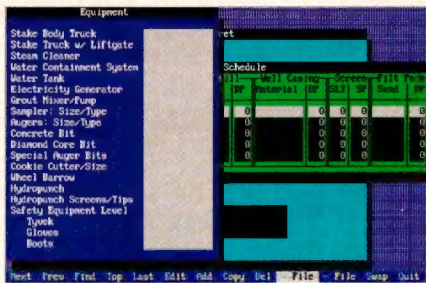
Novell, Nancy Woodward, V.P. and G.M., Development Products: "We searched the industry for the best 386 C compiler technology to incorporate with our developer toolkits. Our choice was WATCOM."

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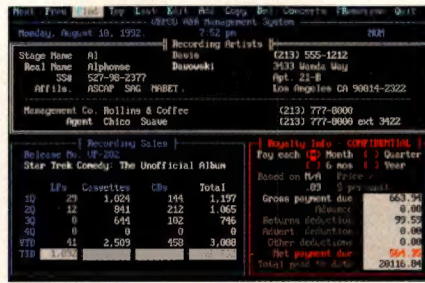
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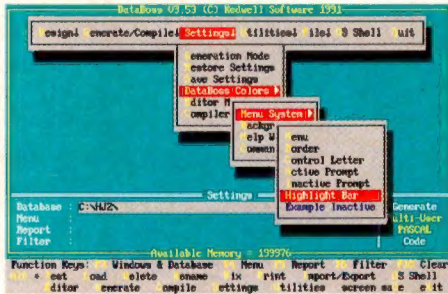
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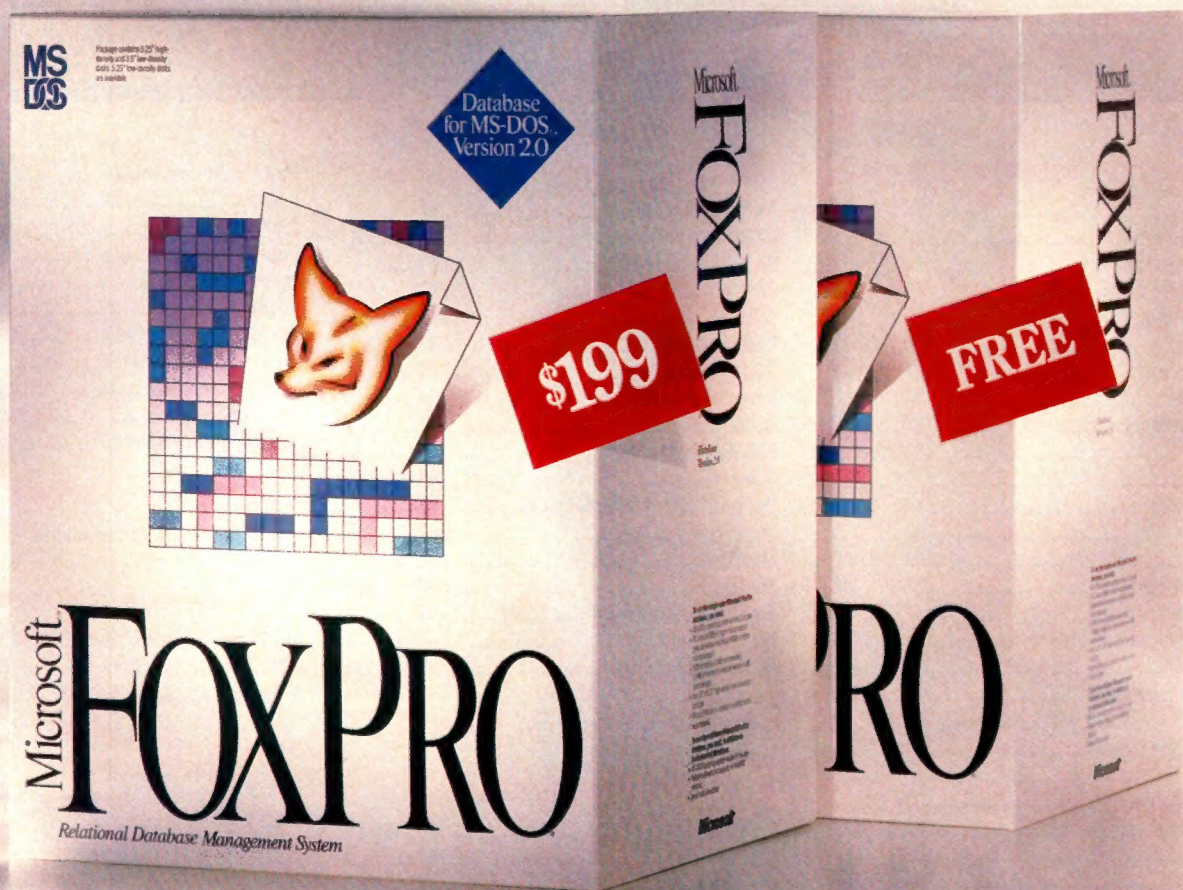
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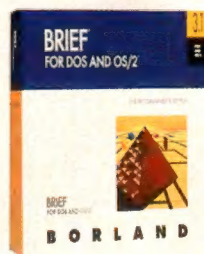
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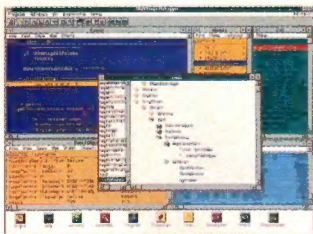
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power you need to solve your industrial strength C++ debugging problems in a Windows-hosted environment. Major C++ features include: an integrated C++ class hierarchy browser, C++ object browsing and complete C++ expression evaluation. Additional features include: the CommandBar™ to provide quick access to debugging commands, superior message spying, 386/486 watchpoints, and the Crash Analyzer System for finding the cause of (U)AEs after the fact.

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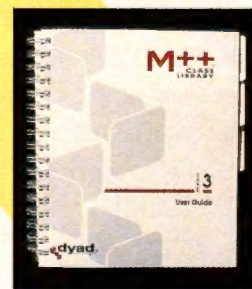
List: \$295 Ours: \$265

OS/2 2.0 and ResourceSHIELD:

List: \$490 Ours: \$404- \$369! save!

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ED, the Programmer's Editor for Windows, by Lifeboat Software

At last! A full-featured Windows-based programmer's editor is here! ED is setting the standard with features like background compilation, automatic code indenting and completion, hypertext function/procedure lookups, "smart" language-specific editing, a fast "C" extension language, Windows Toolbar, unlimited undo and redo, keyboard macros and remapping, and emulation of popular DOS editors (BRIEF, Wordstar, Qedit, Norton). Order today and discover the Windows editing tool for the 90's.



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OS/2 2.0 & Brian Proffit's Book OS/2 Application Development Tools

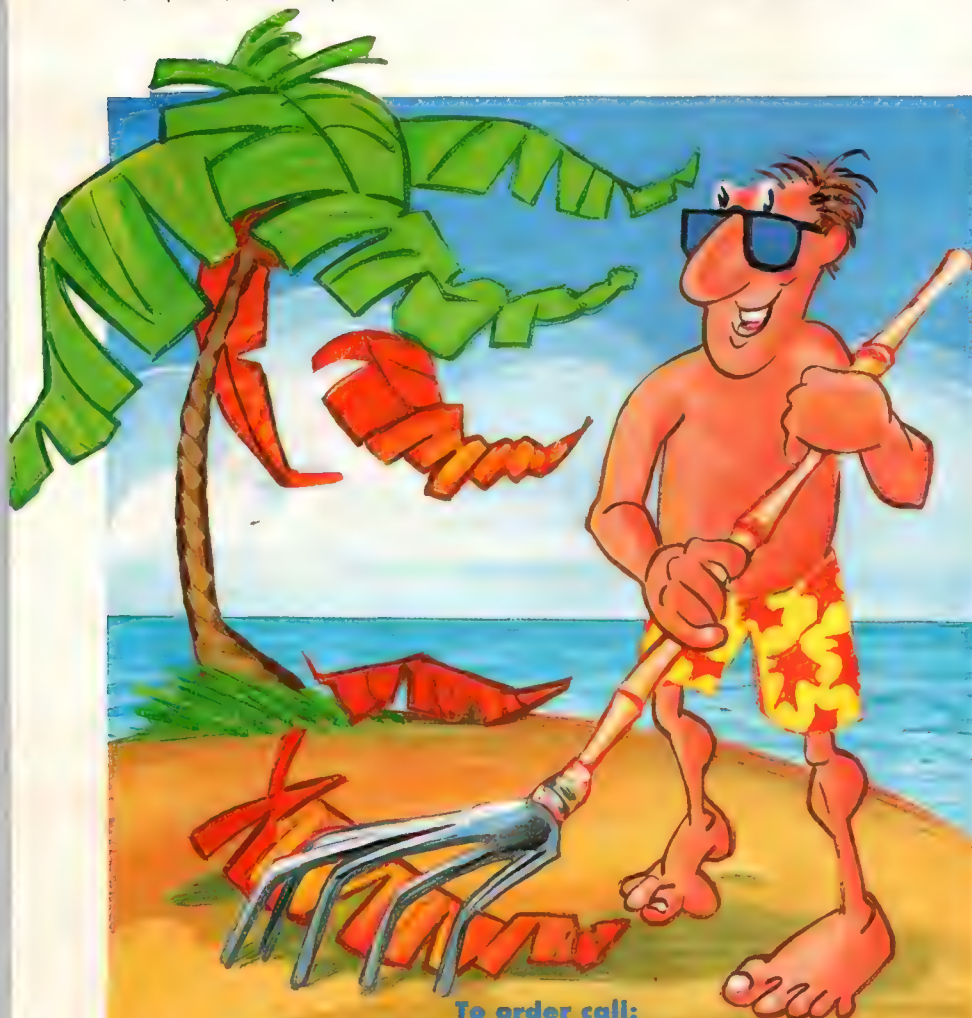
Are you ready to give OS/2 2.0 a try as a development platform. Take this opportunity to pick up a valuable resource book. OS/2 2.0 Application Development Tools provides detailed information on hundreds of development tools currently available for OS/2. IBM Tools expert, Brian Proffit, details what to use, when and why from his own experience. Read the book and give Programmer's Paradise a call to discuss the tools you need. There's information on hundreds of tools. A must for the serious developer!

Just \$19*

(*with the purchase of OS/2 2.0 or any OS/2 development tool.)



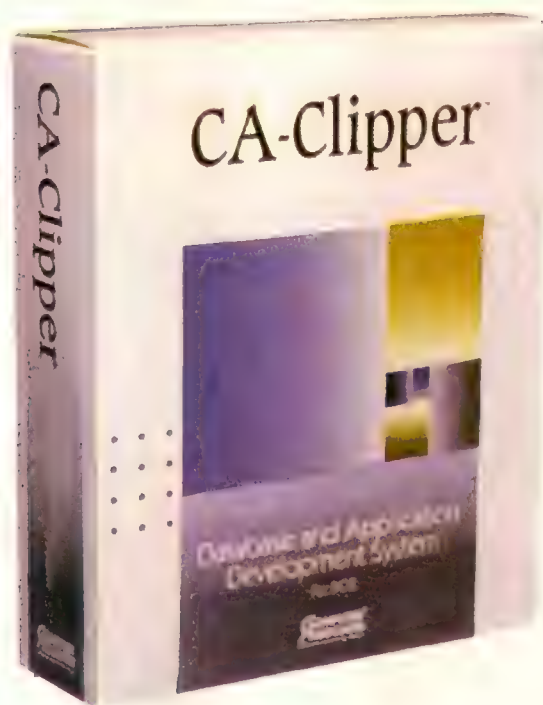
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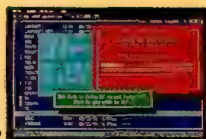
Industry Currents



INSTALL Update...

Knowledge Dynamics Corp.
Canyon Lake, TX

Knowledge Dynamics Corp. is now shipping a major update to their award-winning INSTALL program. Version 3.2 features 40% better data compression than prior versions and an optional Pop-Up Hypertext Help TSR (compatible with Norton Guides). Additionally, enhancements to the script language allow simulation of target environments, assignment statements, string-manipulation, rebooting, and more.



OPTLINK 3.0 for Windows

SLR Systems
Butler, PA

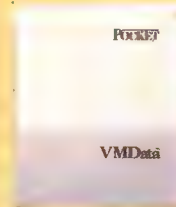
OPTLINK 3.0 for Windows adds true smart-linking and p-code support for C/C++ 7.0. The World's Fastest Windows linker, OPTLINK is a drop-in replacement for LINK. Supports all compilers and assemblers that generate standard .OBJ files. Slash your link time and eliminate the need to run RC besides! No limits on application size or complexity. Supports CodeView 3.x and 4.x. Generates 16-bit .EXEs and .DLLs for both Windows and OS/2.



Announcing VMData!

Pocket Soft, Houston, TX

VMData provides a uniform, cross-platform method of managing a program's dynamically-allocated data. Saves Windows developers from designing complex data-management routines. Allows porting applications from one operating system to another. Provides a platform-independent virtual-memory scheme for managing dynamically allocated data. VMData efficiently manages the operating-system interface, manipulating the data between all of the memory resources available to the platform.



QuickForm Contracts!

Invisible Hand Software
Annandale, VA

QuickForm Contracts is an expert system for your PC that automates the drafting of nine categories of contracts most often needed by software developers and consultants. Prompts you with multiple choice questions, then automatically assembles a "near custom" agreement weighted to your side of the transaction. Produces millions of variations of documents. Port any document to your word processor for fine tuning by counsel. Saves time, money and let's you hit the table first with a document weighted in your favor. See QuickForm Contracts advertisement on page 2.



Virtual Windowing and Display Power!

TeraTech, Rockville, MD

TeraTech delivers virtual windowing and display power! Written in assembly, Virt-Winlets you write complex displays to memory and snap them on in an eye blink. Take partial screen snapshots and cut and paste screen segments. Virt-Win supports Herc, CGA, EGA, VGA and SVGA. Windowing system allows an unlimited number of overlapping windows that can move, resize, shadow, and explode! Contents may be bigger than physical window and can be panned and zoom at will.



NEW From Microsoft!

Microsoft Corporation
Redmond, WA

If you've ever used Visual Basic for Windows, you know how easy it can be to create full-featured applications for the Windows operating system. Wouldn't it be great if you could have the same freedom and productivity when you develop for MS-DOS? Now you can. Microsoft Corporation recently released Microsoft Visual Basic for MS-DOS. Combining fast, visual design tools with efficient, event-driven code, Microsoft Visual Basic for MS-DOS gives you the benefits of advanced programming without the time investment of learning it.



Test Your Resources

The Stirling Group, Schaumburg, IL
ResourceSHIELD

is a visual development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under MS Windows, OS/2, and Windows NT. Use to visually create and interactively test resources such as dialog boxes, bitmaps, cursors, icons, accelerators and menus quickly and easily. Eliminates the time consuming edit-compile-link development cycle. Customize aspects of graphical application's look and feel, translate applications into foreign languages without having access to the application's source code. Directly modify .EXE files without having access to the source code.

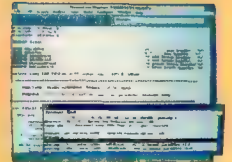


Industry Currents

InnoVision Introduces Persona

InnoVision Software, Inc., Pittsburgh, PA

InnoVision Software introduces *Persona for Windows*, an Integrated Development Environment that runs under MS Windows. Persona's fast, full-featured programmer's editor provides both CUA and BRIEF emulations. The IDE provides compile, test and debug facilities, project configuration, function TAGS and a host of other features. Persona is full featured enough to make you leave your favorite DOS editor, and simple enough to install and configure that you will be up and running within 5 minutes.



Windows Help Files - So Easy, It's Magic!

Software Interphase, Inc., Foster, RI

The *Windows Help Magician* is an integrated help development system that simplifies the creation of help files for MS Windows. Allows help developers to create, edit, import, and test the functionality of help files within a single, integrated environment. Create jumps and pop-ups by simply marking words or phrases within the help text. Include bitmaps and all forms of hot spots. Create and dynamically order single or multiple Browse sequences. Also allows the importing of ASCII text and RTF files written with MS Word for Windows. Manuals created with Word can be imported into the Help Magician and turned into on-line help. The built-in editor includes all the popular editor functions such as copy, find, cut, and paste. Help files can be tested immediately. And once the help file is created, the Help Magician quickly writes the RTF file and runs the Help Compiler. Supports all Windows languages and is a must for anyone writing Windows help files.

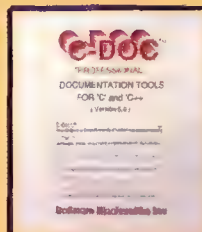


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latest
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Automated Documentation Made Easy!

Software Blacksmiths Inc., Toronto, ON

V5.0 of the C-DOC documentation tools for 'C' and 'C++' now have an easy to use "point-and-click" Graphical User Interface. This makes it even easier to generate accurate and up-to-date documentation fast and automatically. All it takes is a mouse click to generate caller/called function hierarchy tree-diagrams, identifier cross-references, documentation and complexity metrics, annotated action-diagram listings, and more. Reformat source code to user selectable standardized formats, including the automatic generation and insertion of comment blocks for each function!



Improve Your Ability With Agility/VB

Apex Software Corporation, Pittsburgh, PA

Agility/VB provides the combination Visual Basic programmers have been looking for—a powerful set of function calls for programming control over database operations and grid, text, button and picture custom controls for programming ease. Includes the View Editor, a graphical tool to define complex database relationships. Supports dBASE file formats as well as a native format for variable-length data.

Agility/VB



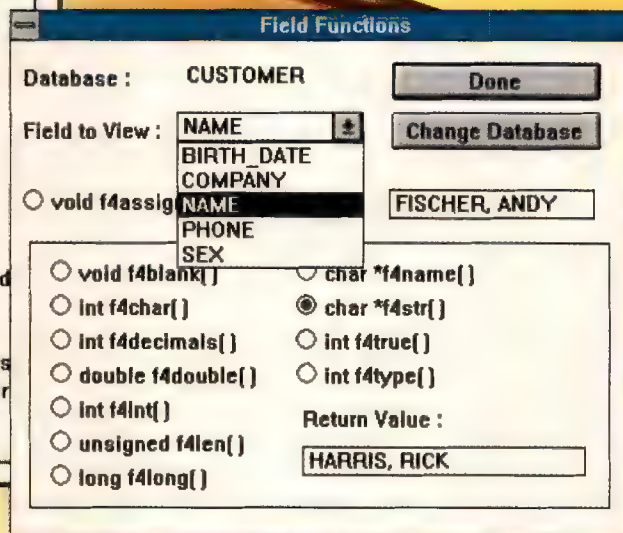
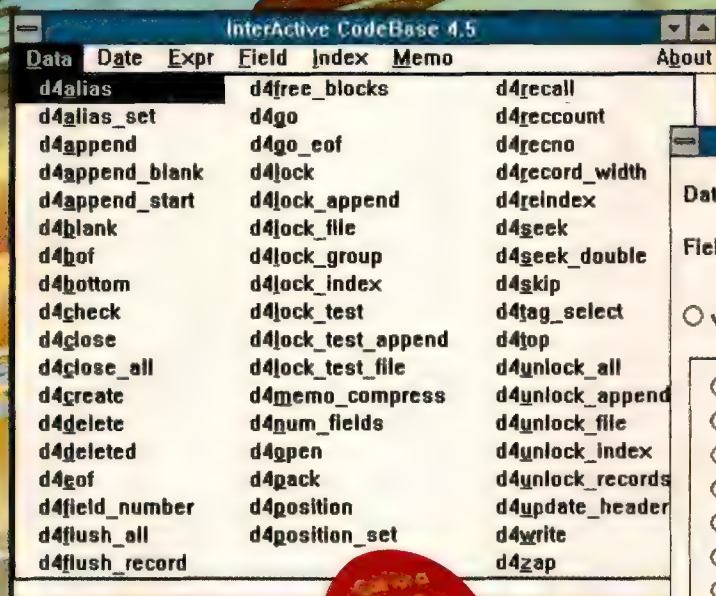
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**Lenel Systems
Rochester, NY**

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[MS WINDOWS]



[DOS GRAPHICS]



[DOS TEXT]

FEATURE	ZINC INTERFACE LIBRARY 3.0	MICROSOFT FOUNDATION CLASSES	BORLAND APPLICATION FRAMEWORKS	
			TURBO VISION	OBJECT WINDOWS
WINDOWS 3.X	■	■		■
DOS GRAPHICS	■			
DOS TEXT	■		■	
SINGLE-SOURCE SUPPORT FOR WINDOWS 3.X, DOS GRAPHICS AND DOS TEXT	■			
FULL ACCESS TO WINDOWS API	■	■		■
MULTIPLE COMPILER SUPPORT (ZINC SUPPORTS BORLAND, MICROSOFT AND ZORTECH C++ IN ONE BOX)	■			
INTEGRATED DESIGN TOOL	■	□		□
WINDOWS (PARENT, CHILD, MDI), MENUS (PULL-DOWN, POP-UP, HIERARCHICAL), BUTTONS (REGULAR, BITMAP, RADIO BUTTON, CHECK BOX), GROUP BOXES, COMBO BOXES, HORIZONTAL AND VERTICAL SCROLL BARS, VERTICAL SCROLLING LISTS, STRING INPUT FIELDS	■	■	■	■
DATE, TIME, NUMBER AND FORMATTED STRING INPUT FIELDS, HORIZONTAL SCROLLING LIST BOXES, TOOL BARS	■			
LIST BOXES, COMBO BOXES AND TOOL BARS THAT CONTAIN ICONS, BUTTONS, RADIO BUTTONS, CHECK BOXES AND INPUT FIELDS (E.G. STRING, DATE, TIME)	■			
BUILT IN DATA VALIDATION	■			
NO EXTENSIONS TO C++ LANGUAGE REQUIRED	■	■	■	

□ RESOURCE TOOLS ARE INCLUDED, BUT DO NOT PROVIDE DIRECT INTEGRATION OF USER PROCEDURES AND VALIDATION ROUTINES OR DIRECT ACCESS TO LIBRARY OPTIONS.

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Q & A

with

Gordon Eubanks is the President and CEO of Symantec Corporation and is Chairman of the Board of Directors.

Gordon

Previously, Mr. Eubanks was vice president of Digital Research Inc.'s commercial systems division, where he was responsible for the development and marketing of all system software products. He left Digital Research in September 1983. Mr. Eubanks founded Compiler Systems, Inc. and authored its products: CBASIC, one of the first successful languages on personal computers, and CB80, a compiled version of CBASIC. Compiler Systems was acquired by Digital Research in August 1981.

Eubanks

Mr. Eubanks received his bachelor of science degree in Electrical Engineering from Oklahoma State University. He received his Master's degree in Computer Science from Naval Postgraduate School in Monterey, California. Mr. Eubanks was a commissioned officer in the U.S. Navy serving in the Nuclear Submarine Force from 1970 to 1979. He is a member of the IEEE and ACM and is an elected member and chairman of the board of directors for the Software Publishers Association.



Q Symantec has grown rapidly in the last few years, largely due to successful acquisitions. Merging together many different companies to form a more unified, focused corporation would seem to be a daunting task. Yet Symantec seems to have mastered the process. What does it take to work?

A The process of completing mergers and acquisitions certainly presents us with a unique set of challenges. In order to smoothly integrate an acquired company into Symantec, several components must fall into place. To insure a smooth transition, we must effectively communicate our strategies and expectations while taking the time to understand the values and concerns of the acquired company. We must also ensure

a smooth integration of our operations which involves the expertise and coordination of many areas in the companies. An essential element in this process is a well-prepared announcement which minimizes uncertainty among our customers and employees and maximizes the messages we want to convey about the acquisition. Mergers and acquisitions provide an excellent platform for us to provide a broad line of leading products to customers.

Q Symantec has been increasingly active in the development tools market beginning with the acquisition of Zortech last year, and the recent acquisitions of the Whitewater group and Multiscopex. Will Symantec be pursuing more acquisitions in this segment of the market?

A Symantec is planning to grow dramatically in the development tools area. We are now the leaders in the Macintosh market with Think C and Pascal, our innovative incremental development environments. With our acquisition of Zortech, announced in July 1991, we now also offer the best 32-bit C++ compiler technology on all major desktop platforms – DOS, Windows, OS/2, Windows NT, UNIX, and Macintosh. Multiscopex enhances this cross platform offering by providing the industry's most powerful Windows-hosted debuggers. The Whitewater group, well-known for their object-oriented environment, Actor, will be the cornerstone for leading edge tools in the future. In addition, we have recently announced an agreement with

Gordon Eubanks

Apple, to jointly develop a cross-platform technology called Bedrock framework. This framework is based on work done at Symantec over the last three years. This object-oriented framework is designed to allow commercial and corporate developers to produce applications for multiple platforms more quickly and reliably. Our first implementation will target Windows and Macintosh; we plan to support all major desktop platforms in the near future.

You can now see our development tools strategy unfolding—to provide industrial strength developer tools for all major desktop platforms, allowing programmers to develop applications quickly with the highest quality.

Q Tell us about your current plans for the products from the Whitewater Group and Multiscope?

A We will continue to support all products from Multiscope and Whitewater and will be announcing new products from both groups in the near future. In August, we announced a major update to the Multiscope debuggers for DOS and Windows. Multiscope debuggers allow you to debug your application in the way which is most convenient to you, using a Windows-hosted debugger within Windows, via a remote network or serial line, from a post-crash viewpoint, and more. This new version of the debugger includes new C and C++ debugging support, a CodeView compatible command-line option, and advanced data browsing. Multiscope debuggers are now available for Microsoft C6, Microsoft C7, and for the first time, Borland applications. (Refer to the page 146 for product descriptions.)

Q There has been a plethora of recent acquisitions by companies other than Symantec in both the development tools and database categories of software. Do you expect increased consolidation? Is this good or bad news for customers?

A From recent indications, consolidation does seem to be on the upswing. This is good news for customers since teaming up with other companies helps us offer them even more value. Despite increased consolidation in the industry, there continues to be emerging opportunity for new companies in the markets and technologies.

Q Symantec has typically followed a strategy of acquiring products in high growth categories where the acquired product has the potential to dominate that category. If Zortech is to follow suit, there is much to overcome. Borland is deeply entrenched in the C++ Compiler market. The more recent competitor, Microsoft, has a tremendous C registered user base from which to upgrade. Watcom and IBM will soon join the competition. What are Symantec's motivations behind this acquisition?

A C++ is emerging as a language of the 90's. There is also a strong demand for development tools which can be used to develop applications for many different desktop platforms and in multiple spoken languages. Symantec's strategy directly addresses these needs—with tools such as Zortech C++ and the Bedrock Framework which allow developers to produce applications targeted to many platforms. Zortech C++ is already way ahead of our



*Gordon Eubanks President & CEO
Symantec Corporation*

major competitors with a 32-bit compiler for DOS/Windows and the first production quality C++ compilers for OS/2 2.0 and Windows NT. Whether you are developing for a single platform or for many platforms, Symantec offers tools which meet the needs of professional developers.

Q Elaborate on why every software developer should own a copy of Norton Desktop for DOS and/or Windows?

A Developers are always looking for ways to save time, money, energy and data. The automation and customization capabilities in the Norton Desktop for Windows and the Norton Desktop for DOS allow developers to work faster, smarter and with better results. With antivirus and back-up tools included in the package, these products are valuable productivity tools for developers. ♦

Questions were submitted to Gordon Eubanks by Jeff Largiader, Vice President of Marketing at Programmer's Paradise.

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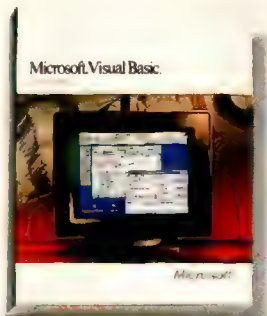
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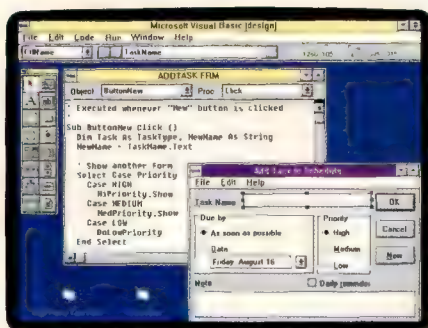
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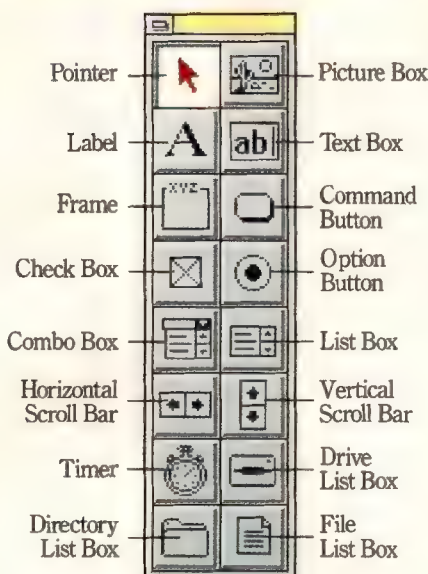
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And Visual Basic's compiler is the industry's fastest.

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PROGRAMMER'S TIPS

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- A general-purpose programming language includes all structured programming constructs.
- Visual design tools for creating the user interface of an application, with all standard Windows controls.
- Tightly-integrated, Windows-hosted development environment uses an event-driven programming engine to automatically recognize events and call the appropriate procedure.
- Compilation speed of up to 1,000,000 lines per minute.
- Integrated source-level debugger lets you inter-
- actively debug a program in its running state.
- High-level access to Windows systems capabilities including drag-and-drop, dynamic data exchange (DDE), and clipboard support.
- Extensibility via dynamic link libraries (DLLs), including direct calls to the Windows API. Extend the development environment by adding custom controls.
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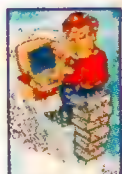
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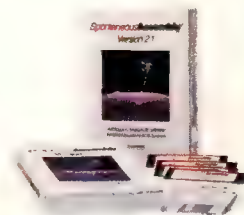
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- ◆ C-Xref for cross-referencing
- ◆ C-Tree for function call analysis
- ◆ C-Lines to intelligently print C programs
- ◆ C-Format to reformat C programs

Sample C-Lines Output

```

10 double sin( double x )
11 {
12     if( x < 0 )
13     { return -sin(-x); }
14     while( x > 2 * pi )
15     { x -= 2 * pi; }
16     return sin_1(x);
17 }
    
```

Six Reasons to Choose C-Vision

- ◆ Built with 386 DOS extender for high speed and so you won't run out of space
- ◆ Intelligent cross-referencing—can distinguish between declarations, uses and modifications of variables
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- ◆ Uses the same syntax engine as the thoroughly tested PC-lint
- ◆ Project file compatible with PC-lint
- ◆ Numerous options to satisfy the most persnickety programmer

Sample Hierarchy Tree

```

1: tan(double), returns double, t.c 22
2: cos(double), returns double, t.c 18
3: sin(double), returns double, t.c 10 [self]
4: sin_1(double), returns double, t.c 2 [self]
   pi, double, t.c 1
    
```

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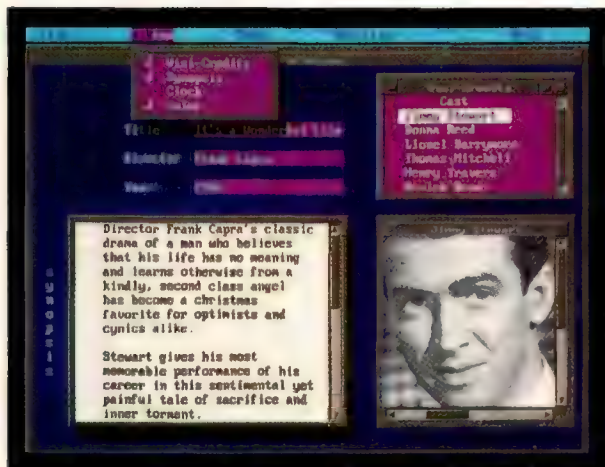
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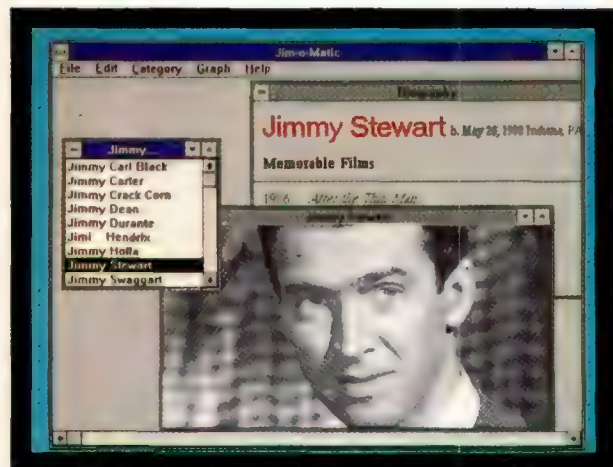
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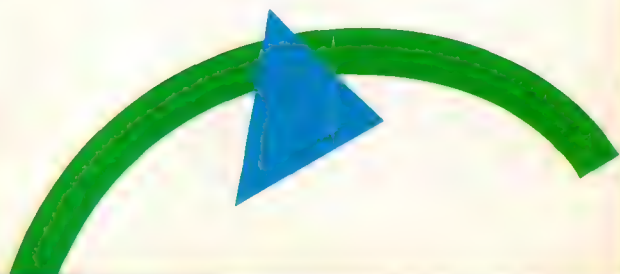
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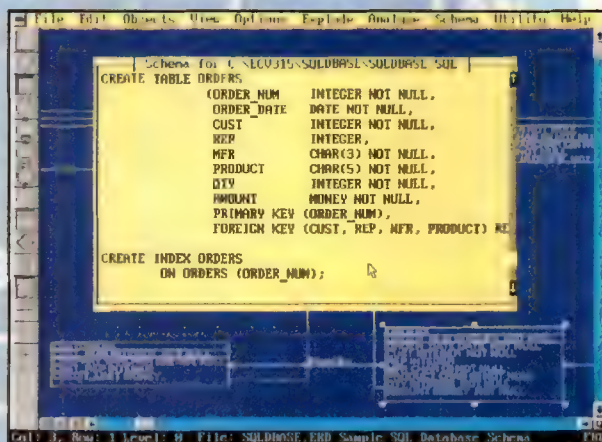
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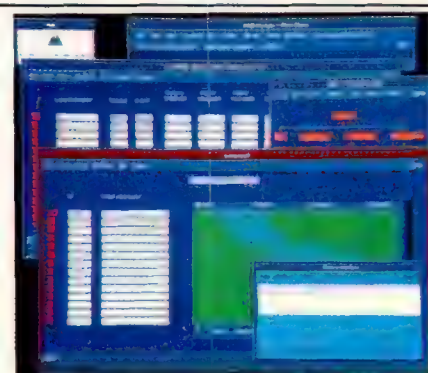
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BY DEBORAH HERATH

BRIEF 3.1 has been called the "world's most popular professional programmer's editor," and seems a natural fit for Borland International Inc, the acknowledged leader in language development tools.

Acquired by Borland from Solution Systems, BRIEF is available for both the DOS and OS/2 operating systems in one package. A cornerstone of the programming community for many years, BRIEF 3.1 supports a multitude of programming (and database) languages.

BRIEF 3.1 is well known as a productivity booster, increasing the speed of application development while reducing the likelihood of errors by off-loading those repetitive, tedious and complicated tasks associated with application development. Gene Wang, vice president and general manager of Borland's Languages Business Unit, explains why Borland bought BRIEF, and what it adds to the Borland product line.

"Borland provides the best languages for professional programmers in the marketplace, but we're not content with that," says Wang. "We also want to provide the programming tools that help our customers to become maximally productive. We're doing just that by offering the world's most popular professional programmer's editor — BRIEF 3.1 for DOS and OS/2. We all know that programmers have to manage an increasingly complex development process, and BRIEF is the best tool to simplify application development. We're excited to be able to offer both the DOS and OS/2 versions of BRIEF in one package, to ensure that our users develop "Best of Breed" applications with "Best of Breed" application tools. It's a natural, effective fit with our C++ and Pascal families of products."

Here are some of the features that have made BRIEF the editor of choice by professional programmers:

Powerful Macro Language

BRIEF 3.1 includes a comprehensive C-like macro language, with its own macro compiler and source-level debugger. The macro language enables users to modify and extend BRIEF to suit their individual programming needs.

Compilation Within The Editor

This enables the programmer to edit and compile a file within BRIEF, complete with error detection and positioning. The user may either display errors or warning in a pop-up window, or let BRIEF take him/her from line to line.

Multiple Language Support

BRIEF 3.1 supports all of the most widely-used compilers including Borland C++, Turbo Pascal, dBASE and Assembly; meaning the programmer does not have to build language-specific support for the editor.

Smart Indenting

BRIEF 3.1 recognizes statements that require a change in the indenting level without requiring the programmer to hit even a single key to indent the code.

Statement Completion

An extension of Smart Indenting, Statement Completion completes commonly used statements with one key stroke, inserting the proper delimiters and statements, and returning the cursor to the body of the statement.

Window Support

Quick reference to many files simultaneously is available because of BRIEF's multiple windows, resizable windows and zoom capabilities.

Features New To BRIEF 3.1

The new features in BRIEF 3.1 include mouse support, Extended Memory Specification (EMS), redo, and enhanced dialog box support. Mouse support allows developers to edit with less dependence upon the keyboard. A user-configurable pop-

up window offers access to frequently-used commands, and can be reconfigured by the user. In addition, the mouse enhances window control: one click can create a window that fills an entire screen, or close it out altogether. Once a window is resized, others on the screen adjust to fill the rest of the space. Text from one window can be transferred easily to another, and an edit in one window automatically changes in others. EMS gives the BRIEF user much greater access to the additional memory common in most programmer's computers. Redo and dialog box support means deleted text can be recalled and dialog boxes now include check boxes, radio buttons and push buttons.

Borland Support

What is Borland offering to programmers with this acquisition? Besides offering two products, formally sold separately, in one package, Borland is aggressively offering BRIEF 3.1 for DOS and OS/2 at less than half the cost of what both products together were previously sold. (See Voyager's special pricing on page 8). And Borland was recently ranked #1 (tied) in Customer Satisfaction Among Users at Small, Medium and Large Sized Business in the prestigious J.D. Power and Associates survey. That means that the support of the company is behind the product.

BRIEF 3.1 for DOS and OS/2 is another exceptional value from Borland designed to make a programmer's job easier. This addition to the product line along with Borland's world-class support, continue to make Borland the overwhelming market leader in language and development tools. ♦

Deborah Herath is Channel Marketing Manager at Borland International

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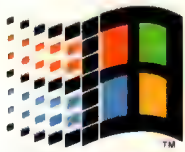
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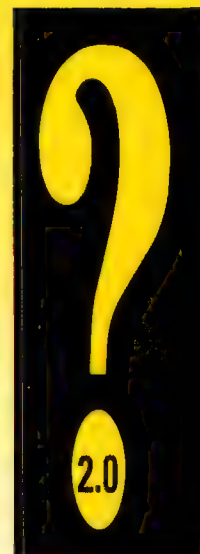
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WHY DEVELOP

ON OS/2



Read the title of this article again.

You'll notice that it doesn't say, "Why develop FOR OS/2 2.0?" There are certainly some good reasons to develop for OS/2 2.0—not the least of which is the fact that IBM has already shipped several hundreds of thousands of copies. Still, there are several reasons why 2.0 is important to developers, even if they're writing code for other platforms. Let's take a look at the key advantages.

by Brian Proffit

COMPATIBILITY MEANS EXPANDED TOOL SET

A major factor of OS/2 2.0 is its compatibility with software written for DOS, Windows, OS/2 16-bit and OS/2 32-bit. This is great for end users, of course, who maintain their investment in applications. This is just as true, however, for developers. If you have a favorite DOS tool, go ahead and use it. If you have a favorite Windows tool, that works fine, as well. You also have access to all of the OS/2 development tools available—over three hundred products. Even if you are developing for other platforms, many OS/2 tools are helpful, particularly products like editors. To put it plainly, you need not just look at the OS/2 section of this catalog. With 2.0, every page shows a potential tool that can be used on OS/2.

Speaking of editors, there is an excellent developer's editor included with OS/2 2.0. The Enhanced Editor (EPM) is an outgrowth of an editor that has been used inside IBM for many years.

It is a full PM editor, using the system clipboard for cut and paste, with nearly unlimited levels of UNDO support. Language syntax assistance is included for C, Pascal, and REXX. Bookmarks are also supported to allow quick movement to key places in your code. Multiple colors and fonts can be used as well. At first glance, that may seem of little interest to a programmer, but there is a lot of productivity to be gained from little things like putting the first line of each function in a different color. When you are paging through your code, it can really help sections stand out.

IBM's Workframe/2 product is also valuable whether you are developing for OS/2 or another platform. The Workframe is essentially an integrated developer's shell, including sophisticated project-based development management functions. Its open architecture means that you can plug your favorite tools into the shell, whether they are aware of it or not. This lets you take advantage of the multi-tasking, multi-windowed develop-

ment environment regardless of the tools you use.

OS/2 2.0's compatibility also means, of course, that you can test your DOS, Windows, or OS/2 applications on the system. While I would recommend that you do your final testing on the platform under which the application will run, most of the preliminary testing can be done on 2.0, giving you continued access to its features.

MULTIPLE WINDOWS

If you never had an editor in one window, a compiler in another, a debugger in a third, a source control system in a fourth, a host session in a fifth, etc., all on the screen simultaneously, you're in for a real treat. The days of having to hotkey back and forth between full screen sessions (or worse—having to end one program to start another) are over.

PRE-EMPTIVE MULTI-TASKING

The buzzword of the 90's is productivity. Everyone is being asked to do more in less time.

Developers in particular have been on the forefront of this push for years. Waiting minutes or even hours for the results of a compile (only to discover it failed because of a missing semicolon—if the compiler knew it was missing, why didn't it insert it?), led programmers to ask for multiple machines so they could be productive on one while waiting for the other.

The multi-programming facilities of current environments go a long way toward resolving this problem. The cooperative multi-tasking that some systems use helps by allowing time-slicing. The pre-emptive multi-tasking used by OS/2 provides an even better solution by enforcing time-slicing, still giving the user consistent performance. In other words, rather than looking at an hourglass, you can be working on other things.

PROTECTED MEMORY MODEL

A programmer once described debugging DOS applications to me as "handshaking with the power switch". While it may not be that bad, there are certainly enough occurrences of having to restart the system via the power switch or the three-finger salute to cause a lot of consternation. This is true not only of DOS, but of other popular extenders and GUI interfaces available for it. Unless the operating environment runs programs in separate address spaces as OS/2 does, there is potential (particularly in the early stages of program debugging) for writing over the information of another program. This is the most common cause of program hangs and Unrecoverable Application Errors.

The protected memory model doesn't, unfortunately, keep your program from having these bugs. It does, however, keep those bugs from crashing the system. If such an error occurs, you simply close the session causing the error and continue. All other programs continue running. No time lost waiting for the system to restart, no data lost from sessions that hadn't been saved before the crash.

"UNLIMITED MEMORY"

Okay, "unlimited" is stretching it a bit. Undoubtedly at some point in the future, we will wonder how people could ever have worked on a system that could only support 512MB of virtual storage. For the time being, however, that seems like an awful lot of space. It means you don't have to worry about using the large or small versions of your compiler. It means that you don't have to worry about whether you have enough memory to call your compiler from within your editor. It means that EACH of your sessions have their own separate 512MB to access—even DOS sessions.

I realize that if you don't have enough physical memory, the system slows down. But the difference between 4MB and 16MB is speed, not functions. OS/2 means that you can effectively run whatever you want, without worrying about whether your memory will support it.

32-BIT PERFORMANCE

Not only can you run your DOS and Windows programs on 2.0, a number of them will actually run faster than on their native platform. 2.0's exploitation of 32-

bit technology allows much more processing power. This is especially true for disk-intensive tasks, since the FAT file system itself has been converted to 32-bit. All programs in the system benefit, whether designed for 32-bit operation or not.

AND MORE...

Oh, by the way, there's another advantage I haven't mentioned yet; price. When is the last time you heard price cited as an advantage for an IBM product? Upgrades from Windows list priced at \$49, and the upgrades from DOS list priced at \$99 are very aggressive. Even after the upgrade promotions are over, the regular list price of \$149 is surprising when you look at everything that buys you.

Your users may choose to live with the limitations of another platform. That doesn't mean that you have to do so, also.



Brian Proffit is a senior programmer in OS/2 software development strategy. He is currently responsible for OS/2 developer tools. He joined the IBM Corporation development laboratory in Boca Raton in 1983 after working as a systems engineer in Dallas.

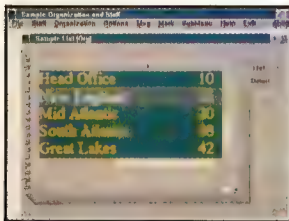
Gpf 2.0

CODE GENERATOR

Gpf Systems, Inc.

GUI Programming Facility (Gpf) is a WYSIWYG visual programming tool for the IBM OS/2 PM environment, and the first standard language code generator to take full advantage of the new OS/2 2.0 32-bit environment and new CUA 91 controls. From an integrated point-and-click environment, the designer can not only create the desired Presentation Manager screens and controls, but add custom application logic and context-sensitive help at design time rather than later. Also creates embedded SQL to facilitate creation of Extended Services DataBase Manager designs.

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Use your favorite OS/2 or Windows development tool to write multi-database applications! Any tool that can call a DLL can use QELIB. QELIB's database API makes it possible to write one application that simultaneously accesses, queries and edits information stored in these database formats: AS/400, Btrieve, dBASE, DB2 Excel files, INGRES, NetWare SQL, Oracle, OS/2 DBM, Paradox, SQLBase, SQL/DS, SQL Server, Sybase, Text files, Tandem and XDB.

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CODE GENERATOR

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WATCOM C9.0/386

32-BIT C DEVELOPMENT

WATCOM



Develop and debug 32-bit applications for extended DOS, OS/2 2.0 and Windows, with the most complete 32-bit C development package available. C9.0/386 is integrated with WorkFrame/2 to provide an ideal environment for developing and debugging 32-bit GUI applications and 32-bit DLLs for OS/2 2.0. Includes royalty-free DOS/4GWIN DOS extender by Rational Systems, components from Microsoft Windows SDK, compiler, linker, debugger, profiler, plus numerous development tools. Supports other industry standard 32-bit DOS extenders. Create ADS Applications for AutoCAD or embedded systems development.

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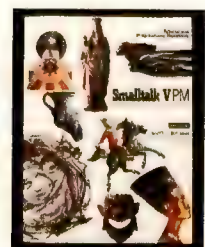
Smalltalk/V PM

SMALLTALK LANGUAGE

Digitalk

Smalltalk/V PM is a fully integrated object-oriented development environment for OS/2 PM. It produces fully compiled executables incrementally, and includes the ability to create PM objects easily and quickly. The system includes thousands of reusable objects, a push-button source-level debugger with single-stepping and object inspection, DDE support, multitasking and more. Smalltalk/V PM can call DLLs written in other languages, and is code compatible with all other Digitalk Smalltalk/V environments. All source code is included.

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RESOURCE TOOL

The Stirling Group



A visual resource development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under OS/2 2.0, Microsoft Windows, and Windows NT. Seven powerful resource editors provide the ability to edit resources in binary or text resource files. A visual integrated development environment makes it easy to organize resource components of applications by organizing them into projects. Resource translators allow users to translate resources between any supported platform. Over 100 ready-to-use, professionally designed resource templates for dialog boxes, menus, icons and accelerators are included royalty free.

List: \$295 Ours: \$266
Bundled with OS/2: \$369
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SQA:ROBOT

TESTING TOOL

Software Quality Automation

Designed to automate the repetitive, labor intensive tasks involved in testing OS/2 Program Manager and Microsoft Windows applications. Create your test scripts by recording every keystroke, mouse movement and window event. With a simple point and click, you can replay one or an entire series of test procedures for unattended test automation. Available in either standalone or networked versions. Sophisticated enough for large corporate projects, yet modular enough for the individual user.



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24-hour product information:

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Info on page 176

Periscope/Remote

DEBUGGER

Periscope

Provides full-screen, source-level support for debugging Base and PM device drivers under OS/2 1.2 or 1.3. Thirty-two-bit support now available with the release of OS/2 2.0. Operates at the system's level (ring 0) with minimal impact on the system being debugged. Offers easy access to any memory location in the system, and can coexist with an applications level (ring 3) debugger. Requires two systems connected via a null-modem cable. The host system runs regular Periscope in DOS acting as the debugger, and the second target runs Periscope/Remote and the software you are debugging.

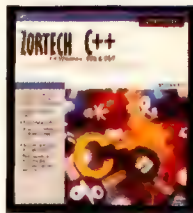
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Zortech C++

C++ LANGUAGE

Symantec



A high performance 32-bit compiler that delivers fast, professional-quality C++ code for the IBM OS/2 2.0 operating system. It includes ANSI C and C++ compilers, ANSI standard libraries, multi-threaded support and a C++ tools class library. The C++ support conforms to the AT&T 3.0 C/Front standards, including precompiled headers and templates. Zortech C++ for OS/2 requires the IBM OS/2 Toolkit and will integrate into the IBM C/Set Workframe and debugger.

List: \$449 Ours: \$337
FAXcetera #: 1953-0001



IBM PRODUCTS

IBM C Set/2

IBM Corporation

Includes a 32-bit SAA C compiler and a fully integrated, source-level Presentation Manager debugger to offer extensive run-time library support for both single and multi-tasking applications.

List: \$696 Ours: \$626
FAXcetera #: 3142-0021

IBM C Devel. WorkSet/2

The complete IBM solution combining the two programs in Workbench (the Developer's Toolkit and WorkFrame/2 program packages) with C Set/2.

List: \$895 Ours: ~~\$806~~ \$369
FAXcetera #: 3142-0022

IBM Developer's Toolkit

The IBM Developer's Toolkit provides a comprehensive set of language-independent tools and code samples fundamental to building advanced OS/2 2.0 programs. Includes System Object Module compiler, resource compiler, kernel debug support and more.

List: \$119 Ours: \$107
FAXcetera #: 3142-0023

IBM Devel. Workbench

An IBM convenience kit consisting of the Developer's Toolkit and WorkFrame/2 program packages allowing you to tap the full power of OS/2 2.0.

List: \$199 Ours: \$179
FAXcetera #: 3142-0024

IBM WorkFrame/2

Aids application development by organizing projects and integrating your preferred tools into the process. Features a project organizer allowing you to easily set up, combine and associate application development.

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Greenleaf Comm++

CODE GENERATOR

Greenleaf Software

Greenleaf Comm++ tears away the barriers to object-oriented programming of communications in applications for DOS, OS/2 and Windows platforms. This library is a self-contained system including abstract base classes and higher level classes which perform all of the functions needed for most communications jobs. Comm++ will accommodate interrupt-driven, circular buffered service for comm ports at baud rates to 115,200 baud. Features include support for Hayes Smartmodems, XMODEM, Kermit, XON/XOFF and VT52 and VT100 (subset) terminal emulation. Supports OS/2 1.3 or 2.0. Full source code, no royalties, free technical support.

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Borland International

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List: \$249

Ours: \$95

FAXcetera #:

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info on page 176

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FORMS UTILITY

JetForm

Prints forms designed with JetForm Design (PC MAGAZINE Editors' Choice/PC WEEK Shootout Winner) in multi-user & network applications. Using OS/2 PM interface, merge variable length data via File passing. Named pipe and spool queue. Any client LAN, including JetForm Filler, can request forms and data merge services. One request can print multiple forms on multiple printers.

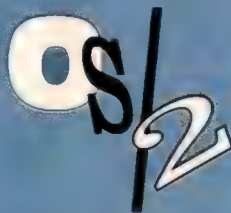
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PGL Toolkit 2.0

LIBRARY

AnSoft, Inc.

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SPF/2

EDITOR

Command Technology

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C++/Views

C++ LIBRARY

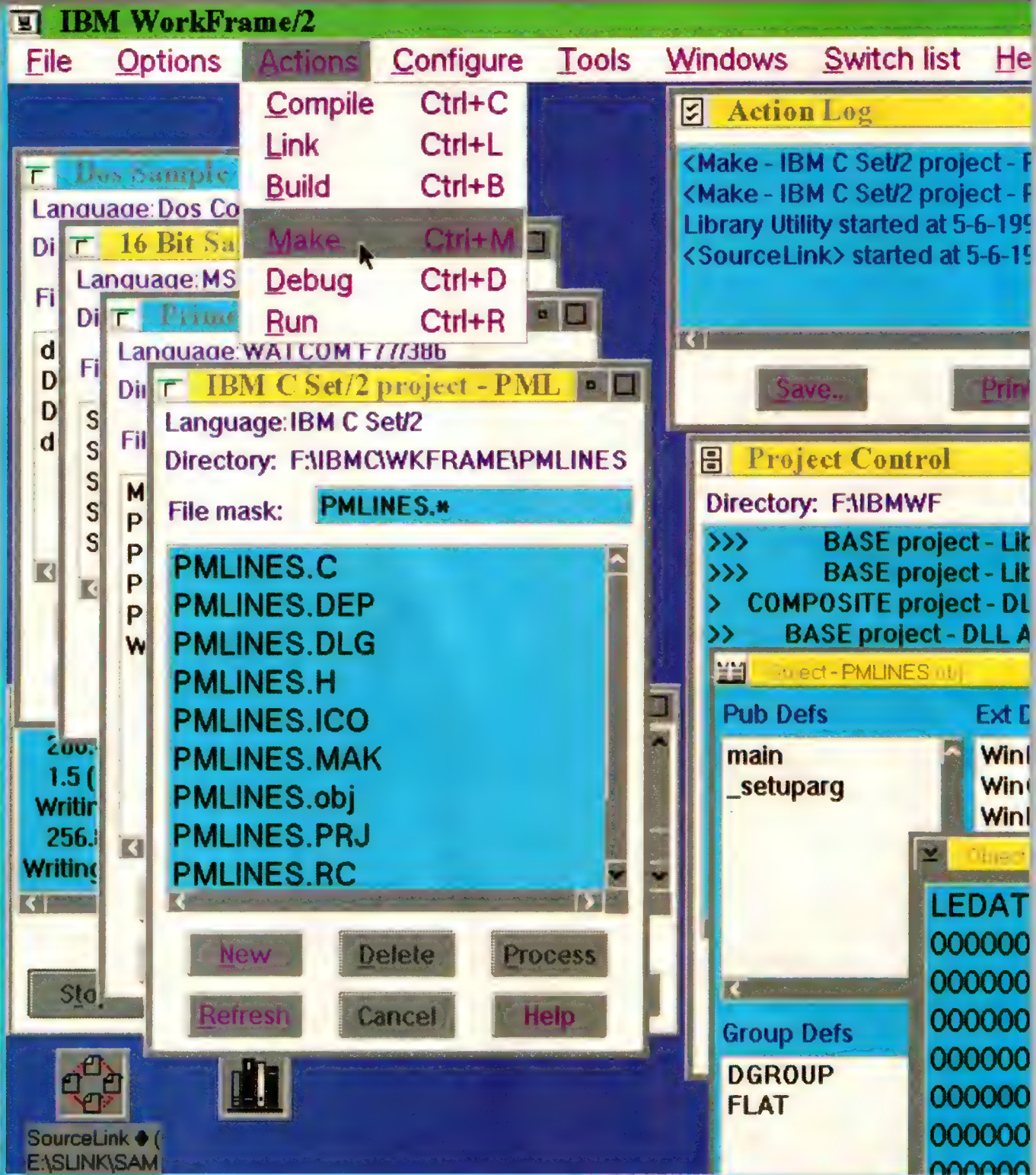
Liant Software

C++/Views is a C++ class library for creating highly portable GUI applications across OS/2, Windows and UNIX/Motif. C++/Views contains more than 100 classes to organize and shield you from the complexities of GUI programming and includes C++/Browse, a powerful source code browser and editor for both building C++ applications and creating new C++ classes.

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OS/2

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Most people wouldn't know what to make of a screen like this. But developers like you know a screen like this can help make all kinds of applications. With OS/2[®] 2.0, you can develop the DOS, Windows[™], OS/2 and host-based apps end users need. And you can do it faster and easier than ever before. Because OS/2 2.0 can make the most of your 386 or 486 processor.

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But maybe the best part is that for less than the cost of DOS and Windows, OS/2 gives you a whole lot more. And to keep your cycle rolling, a full range of services and support are available, like on-line help through OS/2 Support line, Bulletin Board and IBM Link. Or you can join the IBMOS2 and OS2DEV conferences on CompuServe[®], where you can meet IBMers, users and developers who can find fast answers to your questions. For an IBM authorized dealer near you, or to order OS/2 2.0 from IBM, call 1 800 3-IBM-OS2*.



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- 32-bit flat address space for productive programming.
- A full range of IBM services and support.

IBM[®]

OS/2 2.0:

A Development Platform

by Geno Coschi

True 32-bit Operating System

OS/2 2.0 is a true 32-bit operating system for IBM PCs and compatibles. This means that both the operating system and application programs can exploit the memory and speed advantages of 32-bit architecture. OS/2 provides application programs with a contiguous, flat 32-bit virtual address space of up to 512Mb. Developers are free from the complexities of 16-bit segmented architecture. The result is that applications are simpler to write and there is no 640K memory limitation. Furthermore, programs run considerably faster and porting code from other 32-bit platforms is significantly easier.

Multitasking for Productivity

Another feature of OS/2 that strengthens its use as a development platform is its ability to multitask which allows you to have OS/2 do more than one thing at a time. For example, you can initiate a compile of a set of source files in one session and then go on and do other things such as editing in another session, while the compiles are running.

Multiple Execution Environments

In addition to executing native 32-bit OS/2 applications, OS/2 2.0 can also execute 32-bit DOS and Windows applications and 16-bit OS/2 1.x, DOS and Windows applications. This multi-platform capability provides the developer with a wide range of target operating environments for which he can develop and test under OS/2 2.0.

WATCOM Development Tools: The Widest Range of Target Environments

For OS/2 2.0 to be used as a development platform for OS/2, DOS and Windows applications, development tools are required which exploit the multi-target capabilities of OS/2 2.0. The WATCOM C/386 and FORTRAN 77/386 32-bit development tools are unique in this way. These packages include versions of the compiler and tools for OS/2 and DOS, so that you can develop your applications from an OS/2 or DOS session. Development tools include a compiler, linker, debugger, profiler, make, librarian and disassembler. Also included in the products are 32-bit run-time libraries for OS/2, DOS, and Windows.

Multi-target Linking and Debugging

The WATCOM linker is a key component whose features include the ability to generate many executable file formats, including those used by the 16 and 32-bit OS/2, DOS and Windows operating systems. This unique feature allows the application developer to use OS/2 2.0 as a platform for creating 16 and 32-bit OS/2, DOS and Windows executable files. To complete the development cycle, it must be possible to run and debug these applications. OS/2 2.0 can execute 16 and 32-bit OS/2, DOS and Windows applications. The WATCOM debugger, VIDEO, takes full advantage of this, and can actually debug 16-bit OS/2, DOS and Windows applications as well as 32-bit OS/2 and DOS applications. In fact, it is possible to run VIDEO in an OS/2 session to debug a DOS application running in a DOS session.

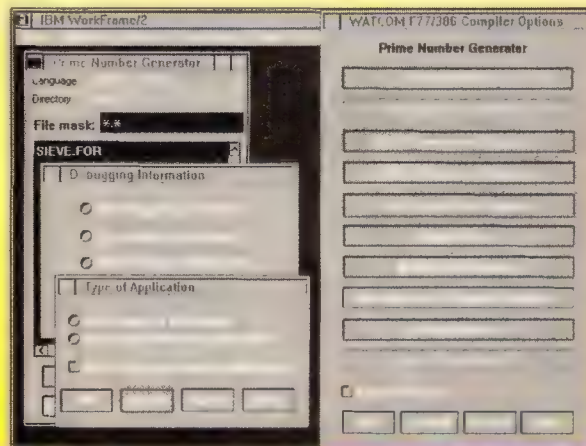
Remote Debugging with VIDEO

An important feature of VIDEO is its remote debugging capability. This allows the use of OS/2 as a debugging host environment from which you can remotely debug applications running on other target environments. For example, WATCOM C/386 supports debugging PenPoint applications that run under GO Corporation's PenPoint operating system. VIDEO, running in an OS/2 session, can debug PenPoint applications by communicating via the parallel port with the machine running the PenPoint application. Similarly, on a Novell network, VIDEO can use the network to debug remote applications on other machines.

WorkFrame/2 Enabled

IBM has developed an integrated development environment (IDE) for OS/2 called WorkFrame/2. WorkFrame/2 allows application developers to create a development environment to suit their requirements and is intended to provide software developers with a consistent user interface for using application development tools. The WATCOM C/386 and FORTRAN 77/386 compilers have been integrated into WorkFrame/2. This integration includes the ability to invoke WATCOM's compilers,

linker, make utility and debugger from within WorkFrame/2. In addition, dialogs are provided that allow the user, for example, to easily specify compiler options. Source code errors detected during compilation are easily corrected by simply clicking on an error message displayed in the output window. This invokes the PM editor and highlights the line to which the error applies.



WATCOM C/386 and FORTRAN 77/386 are integrated with the WorkFrame/2 environment.

Although integrated into WorkFrame/2, the user has the option of invoking the compiler and other tools from the command line from an OS/2 or DOS session. For simplicity, the following examples use the command line approach.

A FORTRAN 77 Example

In order to demonstrate the ability to use OS/2 as a platform to develop applications for multiple target environments, the following example will show the steps required to develop a FORTRAN 77 program that will be targeted for 32-bit OS/2, DOS and Windows. The FORTRAN 77 example will be a program that uses the Sieve of Eratosthenes algorithm to compute prime numbers.

- * This program computes the prime numbers between 1 and 10000
- * using the Sieve of Eratosthenes algorithm.

```

IMPLICIT NONE
INTEGER UPBOUND
PARAMETER (UPBOUND=10000)
INTEGER I, K, PRIMES
LOGICAL*1 NUMBERS(2:UPBOUND)
CHARACTER*11 FORM
PARAMETER (FORM='(A,I5,A,I5)')
DO I = 2, UPBOUND
    NUMBERS(I) = .TRUE.
ENDDO
PRIMES = 0
DO I = 2, UPBOUND
    IF( NUMBERS( I ) )THEN
        PRIMES = PRIMES + 1
        DO K = I + I, UPBOUND, I
            NUMBERS( K ) = .FALSE.
        ENDDO
    ENDDO
PRINT FORM, 'The Number of Primes between 1 and ', UPBOUND,
1      ' are: ', PRIMES
END

```

Assuming this program is contained in the file sieve.for, the following command will compile the program.

```
[C:\]wfc386 sieve
```

The following linker command creates an executable file for the sieve program that can then be executed in an OS/2 session.

```
[C:\]wlink system os2v2 file sieve
```

The system linker directive allows the user to specify in which environment the application will run. Each system name has a number of linker directives associated with it that, for example, identify the format of the executable file to be generated and the run-time libraries to be used to resolve undefined references. There are a number of predefined system names. In the above example, the predefined system name os2v2 is specified to generate an OS/2 2.0 executable file.

In order to link the program to run under DOS, all that we require is to specify a different system name. This is achieved by issuing the following linker command.

```
[C:\]wlink system dos4g file sieve
```

Notice that the system name specified in the system linker directive is dos4g. This system name selects a new set of run-time libraries and generates an executable file that can be run using Rational Systems' DOS/4GW DOS extender. This DOS extender is part of the FORTRAN 77/386 application development package.

Finally, the following commands create a 32-bit Windows version of the same program.

```

[C:\]wlink system win386 file sieve
[C:\]wind -n sieve

```

Notice once again that the system name in the system linker directive has changed to specify the format of the executable file and the run-time libraries to be used. An additional step is required to bind the 32-bit Windows supervisor with the program so that it can execute as a 32-bit application. The program can now execute in an WIN-OS/2 session.

A Presentation Manager Application in C

The following example demonstrates the steps required to compile and link an OS/2 Presentation Manager application written in C programming language. The program continuously draws random shapes.

```

#include <stdlib.h>
#define INCL_WIN
#define INCL_GPI
#include <os2.h>

int SizeX;
int SizeY;
HWND FrameHandle;
HWND WinHandle;
HMQ hMessageQueue;
HAB AnchorBlock;
MRESULT EXPENTRY MainDriver( HWND hwnd, USHORT msg,
MPARAM mp1, MPARAM mp2 )
{
    HPS ps;
    RECTL rcl;

    switch( msg ) {
    case WM_CREATE:
        WinHandle = hwnd;
        WinStartTimer( AnchorBlock, WinHandle, 1, 150 );
        break;
    case WM_TIMER:
        DrawEllipse();
        return( 0 );
    case WM_SIZE:
        SizeX = SHORT1FROMMP( mp2 );
        SizeY = SHORT2FROMMP( mp2 );
        return( 0 );
    case WM_PAINT:
        ps = WinBeginPaint( WinHandle, NULL, NULL );
        WinQueryWindowRect( WinHandle, &rcl );
        WinFillRect( ps, &rcl, CLR_WHITE );
        WinEndPaint( ps );
        return( 0 );
    }
    return( WinDefWindowProc( WinHandle, msg, mp1, mp2 ) );
}

int main()
{
    ULONG style;
    QMSG qmsg;

    AnchorBlock = WinInitialize( 0 );
    if( AnchorBlock == 0 ) return( 0 );
    hMessageQueue = WinCreateMsgQueue( AnchorBlock, 0 );
    if( hMessageQueue == 0 ) return( 0 );
    if( !WinRegisterClass( AnchorBlock, "WATCOM", (PFNWPF)MainDriver,
        CS_SIZEDEFAULT, 0 ) ) return( 0 );
    style = FCF_TITLEBAR | FCF_SYSMENU | FCF_SIZEBORDER
        | FCF_MINMAX | FCF_SHELLPOSITION | FCF_TASKLIST;
    FrameHandle = WinCreateStdWindow( HWND_DESKTOP, WS_VISIBLE,
        &style, "WATCOM", "", 0,
        NULL, 0, &WinHandle );
    if( FrameHandle == 0 ) return( 0 );
    while( WinGetMsg( AnchorBlock, &qmsg, NULL, 0, 0 ) ) {
        WinDispatchMsg( AnchorBlock, &qmsg );
    }
    WinDestroyWindow( FrameHandle );
    WinDestroyMsgQueue( hMessageQueue );
    WinTerminate( AnchorBlock );
    return( 1 );
}

static int Random( int high )
{
    return( ( (double)rand() / 32767 ) * high );
}

static void NewColor( HPS ps )
{
    GpiSetColor( ps, Random( 15 ) + 1 );
}

static void DrawEllipse()
{
    POINTL pt1;
    HPS ps;
    static int Odd = 0;
    int parm1, parm2;

    ps = WinGetPS( WinHandle );
    pt1.x = Random( SizeX );
    pt1.y = Random( SizeY );

```



```

GpiMove( ps, &ptl );
ptl.x = Random( SizeX );
ptl.y = Random( SizeY );
parm1 = Random( 50 );
parm2 = Random( 50 );
if( Random( 10 ) >= 5 ) {
    NewColor( ps );
    GpiBox( ps, DRO_FILL, &ptl, 0, 0 );
    NewColor( ps );
    GpiBox( ps, DRO_OUTLINE, &ptl, 0, 0 );
} else {
    NewColor( ps );
    GpiBox( ps, DRO_FILL, &ptl, parm1, parm2 );
    NewColor( ps );
    GpiBox( ps, DRO_OUTLINE, &ptl, parm1, parm2 );
}
Odd++;
Odd &= 1;
WinReleasePS( ps );
}

```

Assuming this program is contained in the file `pmdemo.c`, the following command can be used to compile the program.

```
[C:\]wcc386 pmdemo
```

The following linker command links the program as a Presentation Manager application that is to run under OS/2 2.0.

```
[C:\]wlink system os2v2 pm file pmdemo
```

The program can now be run in an OS/2 session.


Notice that in addition to specifying the `os2v2` system name in the system linker directive, the `pm` directive must be used to indicate that the executable file is to be marked as a Presentation Manager application.

Summary

OS/2 2.0 is a 32-bit operating system that provides an excellent environment for application development, particularly with WATCOM's 32-bit multi-target compilers.

OS/2 2.0, together with WATCOM's 32-bit compilers, delivers several important advantages for developers over traditional 16-bit environments and tools. Using the capabilities of Intel's 32-bit x86 processors, programs run much faster: typically a 2-3 times computation speedup. Perhaps more importantly, the 32-bit programs can directly use many megabytes of memory and are not restricted by the 640k barrier. Programs are also simpler to write since the complications of the 16-bit segmented architecture can be forgotten.

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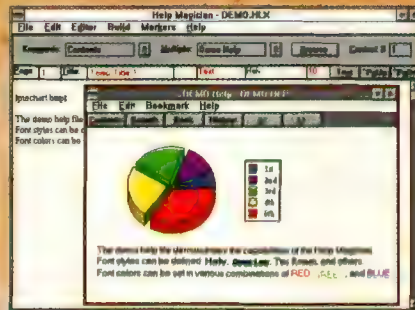
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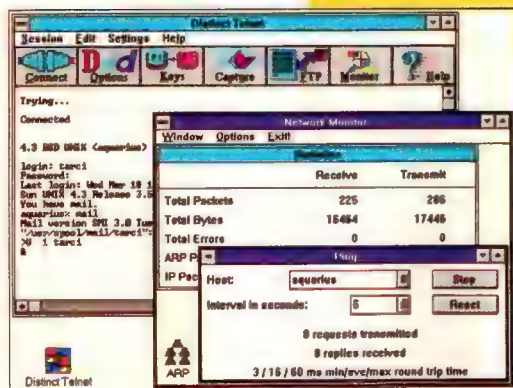
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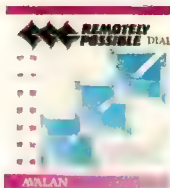
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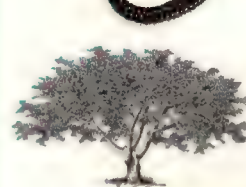
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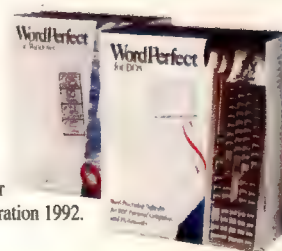
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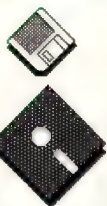
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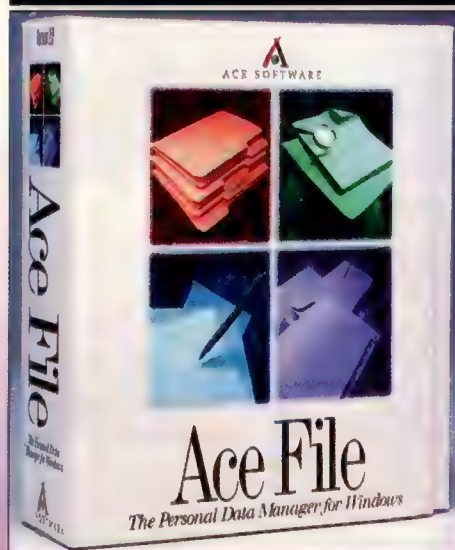
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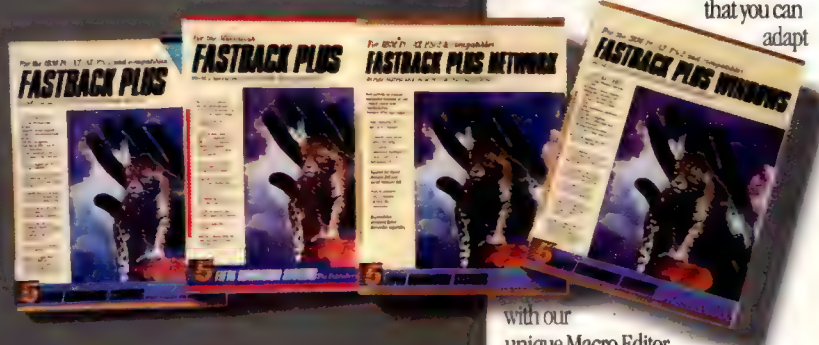
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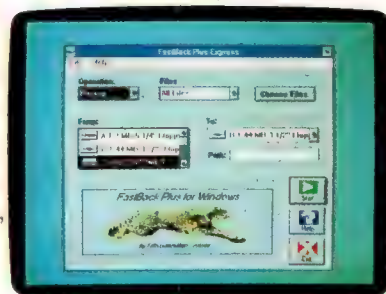
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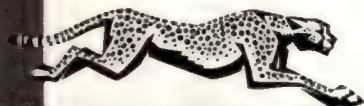
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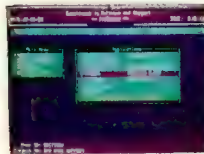
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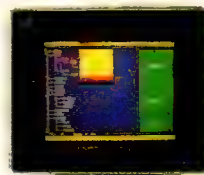
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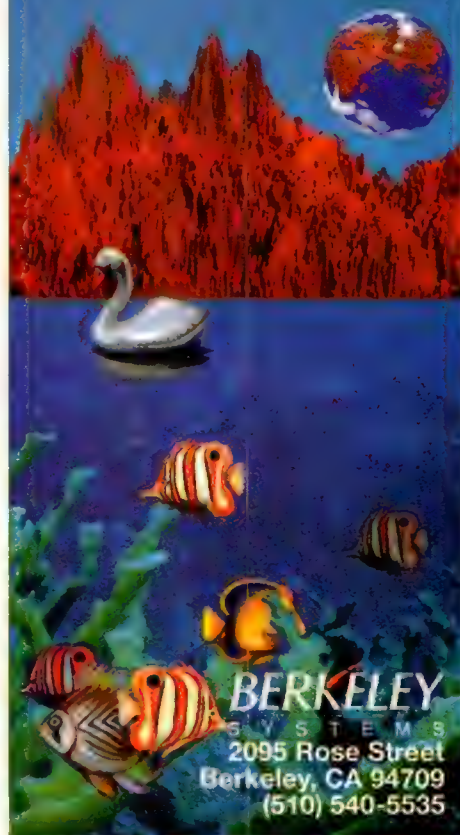
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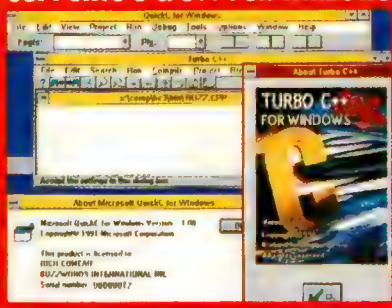


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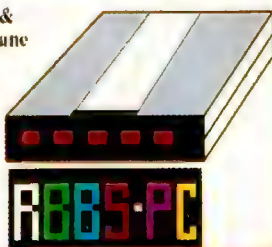
CODE ANALYSIS

```
10 #include <Array.h>
11 int binarySearch(
12     ArrayType v[]
13 )
14 {
15     int low = 0, high, mid;
16     while (low < high)
17     {
18         mid = (low + high) / 2;
19         if (v[mid] < v[mid+1])
20             high = mid + 1;
21         else
22             low = mid + 1;
23     }
24     return (mid);
25 }
26
```

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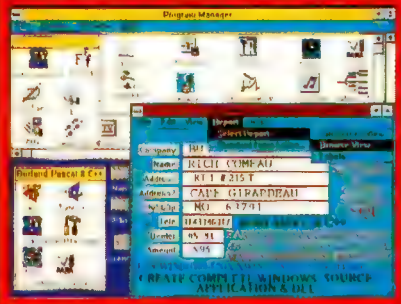
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XBASE COLOR SOURCE

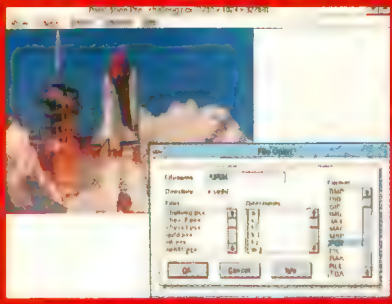
CODE ANALYSIS

```
10 #include <CLIPHEAD>
11 USE MHMAST INDEX MHMAST
12 IF .NOT. EOF()
13     SET INDEX TO FUN
14     ENDIF
15     DO CASE
16     CASE ANSWER = "1" 88 SET YOUR OWN COLORS
17         DO REINDEX
18         CASE ANSWER = "2"
19             DO PICK
20     END CASE
21 IF YN = "Y"
22     IF RECDN() = 10533
23         ? "Need dANALYST To Make Programming Fun & Easy"
24     ENDIF
25 ENDIF
26 RETURN
```

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PARADOX COLOR ANALYSIS

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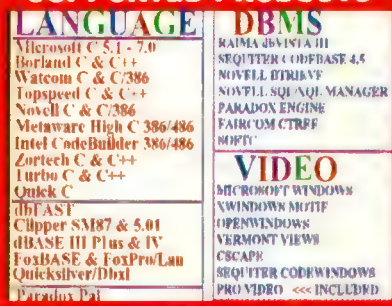
CODE ANALYSIS

```
10 APPEND TO DATABASE
11 PROC ap_append()
12 PRIVATE c, l, i
13 COEDITKEY
14 IF IMAGE RECORDS() > 0 THEN
15     DOWN
16     CHOOSE
17     END
18     WHILE ! c ApFlom()
19         i = ApFlom()
20         i = i + 1
21     ENDWHILE
22     PAINTCANVAS FILL = ATTRIBUTE Ap_Cmber
23     DO, i
24     RETURN
25
```

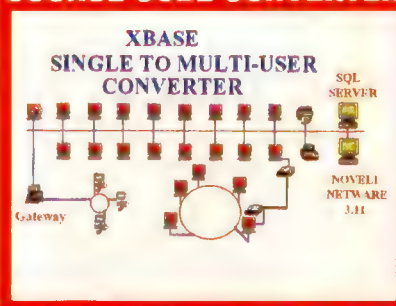
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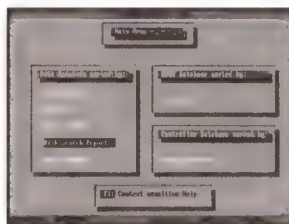


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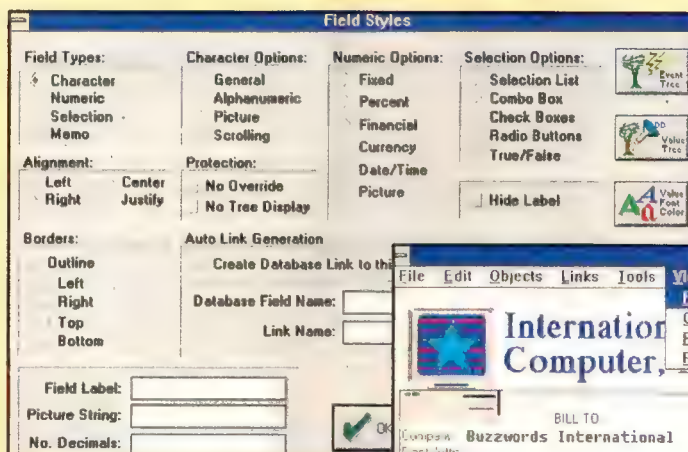
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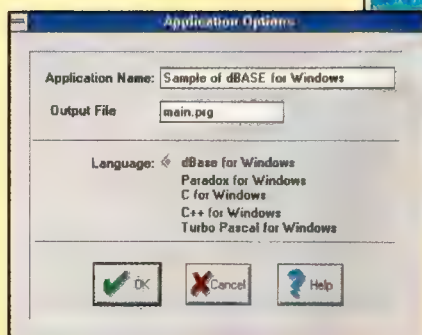
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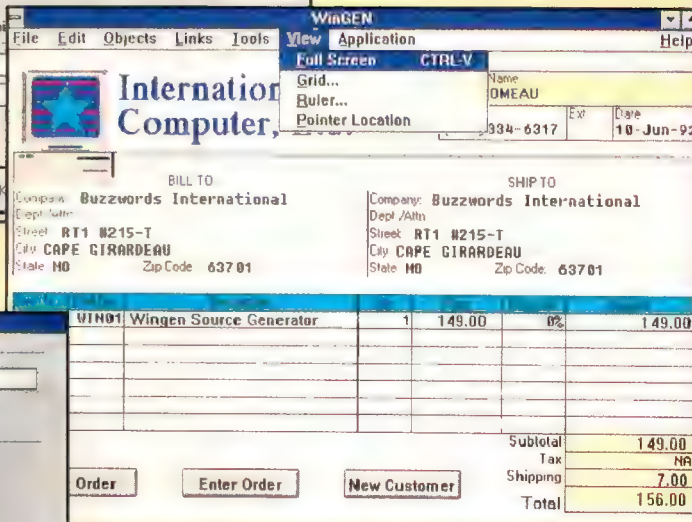
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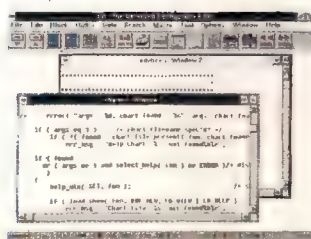
Lifeboat is proud to announce its newest product, **ED-The Programmer's Editor** for Windows and DOS. **ED** is setting the standard for developer's editors in the 90's with its unique combination of powerful features, ease-of-use, and availability under both Windows and DOS.

ED for Windows represents the forefront of today's development technology—combining the features programmer's need with the ease of use of a true Windows application — icon toolbar included.

Lifeboat Software is committed to bringing programmers leading edge tools that work in the real world. **ED** fits this mold well—it enhances a programmer's productivity immediately by letting him focus on programming rather than the mechanics of editing code.

For more information on **ED-The Programmer's Editor**, see our display ad on page 147.

See our new and current product offerings on the following pages, and watch for more new products in the coming year from Lifeboat Software.



**ED-The
Programmer's Editor**

**Dan Bricklin's®
Demo II**

/*resident_C*/

BreakOut-II

C Utility Library

**Essential B-Tree
for Windows**

**Essential
Graphics Chart
for Windows**

Essential B-Tree

**Essential
Graphics Chart**

**Essential
Graphics GUI**

**Essential
Graphics Kernel**

Hold Everything

TSRific

**John Bickart's
CBT Tool Kit**

**John Bickart's
Clip Art**

**John Bickart's
Starter Kit**

PLink86+

PolyLibrarian

TimeSlicer

**Advantage
Disassembler**

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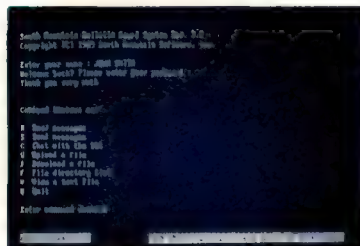
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C Tools that Shape the Things to Come.

The communications library that speaks your language.



Essential Communications version 4.0

Essential Communications is a robust library of functions for communicating between PCs and any RS-232 device.

Features:

- CTS and/or DSR hardware handshaking and XON/XOFF protocols
- NS16550 UART FIFO support
- ANSI and VT52/100 terminal emulation
- Kermit, ZMODEM, XMODEM, YMODEM and YMODEM-g transfer protocols
- Compatibility with most multiport I/O boards
- V.32, MNP and Hayes compatible modem support.



The Professional C Programmer's library. C Utility Library version 5.0

The C Utility Library is a complete, up-to-date and versatile C programming library of over 400 functions for both the experienced and novice C programmer. Includes:

- Screen painter and code generator
- File backup utilities
- Window editor/file browser
- Multiple overlaid windows
- List boxes & file boxes
- Integrated mouse support
- Shadowing capabilities for menus.

The database management library

Essential b-Tree version 2.0

Few things in life are truly essential. But if you create custom databases in C, the Essential B-Tree database management library is an indispensable tool for building that dream DB application. You have complete control over your data with Index Sequential Access Method (ISAM) routines. And now, Essential B-Tree is Unix and Windows compatible for even greater portability. Features include:

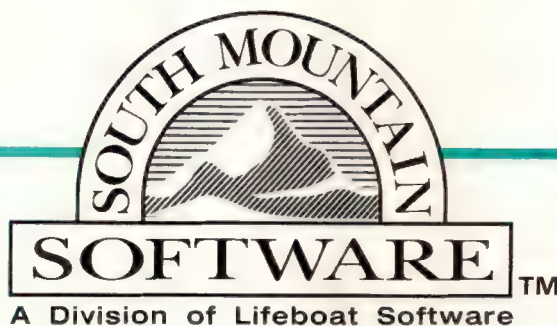
- Fastest access method available
- Fixed and variable length records
- Records up to 64K bytes
- Automatic file and record locking/unlocking
- Support for single/multi user & network databases.

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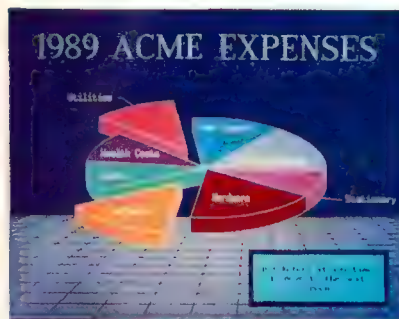
A Complete Set of Graphics Tools

Essential Graphics Kernel Library version 4.0

Essential Graphics Kernel is a fast, powerful and reliable toolkit for creating today's demanding graphics applications.

Features include:

- Over 250 functions
- World coordinates and viewpoints
- Save screens to EMS or disk
- CGA, EGA, VGA, Super VGA and VESA, MCGA, 8514, and Hercules support
- Virtual printer driver for EMS, RAM or disk
- PCX imaging ...and more!



Essential Graphics GUI version 1.5

Essential Graphics GUI is a C programming toolkit for creating graphical user interfaces. It provides an easy-to-use yet powerful selection of user interface objects. Requires Essential Graphics Kernel.

Includes:

- Pop-up, pull-down, vertical and horizontal menus
- Data entry objects
- List and prompt boxes
- Radio buttons, percent bars, boolean objects and more

Essential Graphics Chart Library version 4.0

Essential Graphics Chart provides a complete set of 2-D and 3-D charting functions. Requires Essential Graphics Kernel. Includes:

- True 3-D charting with multi-view and multi-perspective screen output
- 2-D bar, line, pie, High-Low-Close, Above/Below, and scatter charts
- 3-D bar, pyramid, octahedron, pie, above/below charts
- Total control over all chart elements
- Multiple graphs per screen
- Variety of label and legend types



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Dan Bricklin's® Demo II™

The Leading Rapid Prototyping Tool

Demo II™ is the leading tool for producing prototypes, demonstrations, and tutorials. It can be used in a quick and simple fashion by drawing screens and displaying them like slides, or the advanced features can be used to construct prototypes that respond and behave like the real programs.



"What sets Demo II apart is its unique combination of simplicity and the power you need to make your prototype look, act, and feel like the real thing!"

—Dan Bricklin
Co-creator of VisiCalc

"When it comes to explaining software, there's nothing better than Demo II."

—Tom McLaren
Principal
McLaren Associates

"Demo II is by far the best tool out on the market for prototype and demonstration development."

—Doug McGregor
Pres., Athletic
Technologies

Prototyping

Demo II is the world's most popular prototyper, because it's quick and easy to design screens, menus, and other application elements. Applications are sure to satisfy users by letting them use a functional prototype — without writing a line of code.

Tutorials and Demonstrations

Demo II builds tutorials quickly, because a screen only needs to be created one time. All actions, edits and explanations are done with overlays.

The powerful sequencer provides over 100 run actions to control the flow of your tutorial. Your tutorial responds to key presses, modifies and tests variables, produces sounds, and a host of other operations and actions.

Computer-Based Training (CBT)

Demo II includes advanced features such as branching for navigation, review, remediation and testing. The result is a fully capable authoring environment for building CBT systems that range from the enormously complicated to the quick and simple.

Features Include:

- Mouse Support
- VGA, CGA, EGA & Hercules Support
- Autosave
- Text overlay on bitmapped graphics
- CUA feature and templates.

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Join the thousands of satisfied users of Demo II and become more proficient and effective in creating your prototypes, demonstrations, tutorials and CBT systems today!

Professional version

The Professional version includes the ability to encrypt files so they cannot be modified by unauthorized users and removes the Lifeboat Software notice from the beginning of the demo. Upgrade pricing is also available for current users of Demo II.

"Demo II is the only program that will work in our environment...it has been so successful for us because of its simplicity."

—Margaret Sweeney
CBT Developer
Shearson Lehman
Brothers



John Bickart's Starter Kit for Demo II™

**Tap into the real POWER of
Demo II!**

Demo II™ has many powerful features. It has many options. There are so many productive ways you can use it. How do you tap into this power?

With John Bickart's Starter Kit!

- Understand and realize the full capabilities of Demo II
- Review working examples of Demo II files
- Modify pre-built templates for your applications
- Learn all the key features rapidly with live tutorials.

Make the most of your investment in Demo II, in the shortest period of time, by buying John Bickart's Starter Kit for Demo II.

Features include:

Advanced Templates

Sales Demo, Mainframe Simulation, CBT Tutorial, On-line Help System, Forms Screen, Workstation Menus and more.

Self-guided Tour

See how Demo II really works!

My First Project Guide

Detailed instructions on how to get your first Demo II project completed including key by key references.

Quick Reference Guide

Files, Macros, Shortcuts and Overlays

Tutorials

Eight light, rapid demos of every feature of Demo II including screen design, run actions, block operations, macros, overlays, variables, I/O and images.



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TSR at your Fingertips

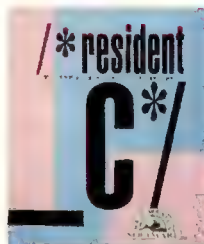


TSRific version 1.0.

The multilingual tool for TSR development. TSRific is the toolkit you need for developing memory efficient and reliable TSRs. It takes just

one function call to turn your program into a powerful TSR.

- Swaps to XMS, EMS, or disk
- 14K maximum RAM used regardless of TSR size
- Saves/Restores text and graphics
- User definable Hotkey
- Compatibility with Borland C/C++, MS C, Pascal, dBASE, Clipper, Foxpro BASIC and more
- Automatically handles interrupt conflicts
- No royalties.



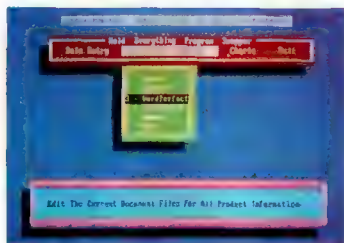
/*resident_C*/ version 4.5.

/*resident_C*/ is a C library which enables you to make your C code memory resident as an ISR or TSR. One function call turns

your C program into a TSR.

- Keeps only 4K of the TSR in memory
- Activated by key stroke or timer
- Includes super keyboard stuffer
- Communicate between TSR and foreground programs
- Allows background processing
- Includes complete source code.

Swap any DOS program— anytime, anywhere.



Hold Everything

With this latest version, if you can write the code, Hold Everything can swap it out of memory. One function call swaps your program out to XMS, EMS, or disk with all but 10K of available memory free for another application to use.

- Saves/Restores Video Mode and Video Page
- EMS support
- Returns error level of last child program
- Up to 127 character command line
- Unique temporary files and multiple temporary file paths
- Built-in Fatal Error handling
- Includes complete source code.

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Professional Development Tools

The Industry Standard Overlay Linker



PLink86+ is an MS-DOS linker and overlay manager for Intel 80x86 processors that lets developers create and manage

programs that are much larger than available memory. The memory requirement is reduced because modules can share memory locations and overlay each other during execution.

- Programs up to 16MB can run in as little as 192K
- Allows your program to run on the widest possible variety of PCs
- Caches overlays in memory, including extended and expanded memory
- Up to 4,096 overlays
- Up to 65,536 program description objects
- Link MS-DOS executables in the background under OS/2.

The Premier Object Module Librarian



Polylibrarian can create object code libraries with any language that produces object modules that can be linked with PLink86+, the

OS/2 and Windows linker, MS Link or a compatible linker. Key features include:

- Ability to share libraries within workgroups for increased efficiency
- Promote use of code
- Exclude unnecessary modules for smaller and faster executables
- Module names, public names, and external names up to 255 characters long
- Ability to create DOS libraries in the background under OS/2.

True Multi-tasking under DOS!



Bring the advantages of true multitasking to your MS-DOS application! Time-Slicer is a library of linkable "C" functions that allow you to create multitasking

and real-time programs at the application level, rather than interfacing with an operating system. Key features include:

- No predefined limit to the number of tasks
- Fast context switching designed for real-time systems
- Intertask communication
- Critical resource management
- Default round-robin scheduling, with complete programmer control over preemption.

"I wish I could see the source code!"



ADVANTAGE Disassembler is an indispensable tool for those programmers who have said this all too often. ADVANTAGE Disassembler

allows you to disassemble MS-DOS executable files and produce comprehensive assembly language source code. Key features include:

- Memory resident disassembler
- Create source files from executables
- Disassembles both .EXE and .COM files
- Math co-processor support.

PLink86+	SRP: \$395
Polylibrarian	SRP: \$249
TimeSlicer	SRP: \$295
ADVANTAGE	
Disassembler	SRP: \$295

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NEW PRODUCTS from LIFEBOAT® Software



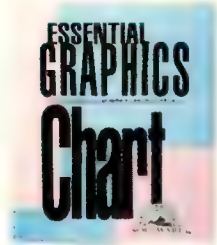
Essential Graphics Chart™ for Windows

The advent of graphical programming and GUIs means the days of bland statistics and tables are a thing of the past. Essential Graphics Chart for Windows lets you turn your data into charts and graphs that make an immediate visual impact. From South Mountain Software.

Features include:

- DLL - works with any Windows API compatible language
- 2D bar, stacked bar, pie, line, scatter, hi-low-close, pyramid and area charts
- 3D bar, stacked bar, pie, pyramid and area charts
- Legends for all chart types
- Real-time charts with scrolling horizontal axis and data values
- True perspective and rotational capability
- Hardcopy to any bitmap capable printer supported by Windows
- No royalties

SRP: CALL



John Bickart's® Clip Art for Demo II™

Add excitement to your Demo II presentation. John Bickart's Clip Art for Demo II adds sights, sounds, and color to bring a professional look to your Demo II prototype, demonstration, or tutorial.

Features include:

- Graphics Library of 300 bitmapped images ready to use with Demo II - mixed VGA, EGA, CGA, and mono
- Sounds Library - sound effects, melodies, a piano player, and a note range - add your own music!
- Library of large text letters for use in titles and illustrations
- Colors Library - Color schemes, sample menu screens in different colors and styles, and a series of text windows designed for displaying text on a screen

SRP: \$79



Call today, and
add sizzle to
your Demo II
project.

John Bickart's® CBT Tool Kit for Demo II™

Build effective tutorials - rapidly! Demo II is the perfect tool for CBT - it has the features of dedicated authoring software at a fraction of the price. Major corporations - such as Novell and Ford - rely on Demo II to build tutorials that work. John Bickart's CBT Tool Kit lets you rapidly build sophisticated CBT tutorials by providing you with pre-built Demo II templates and examples that you can cut and paste into your own lessons.



Highlights include:

- Complete working CBT models
- Student responses to a question
- Feedback on student progress
- Gaming as an instructional tool - complete example game included
- Expert reviews for wrong answers
- Tracking a student's progress
- Smart glossaries
- Electronic bookmarks

...and much more!

PLUS, when you purchase John Bickart's CBT Tool Kit for Demo II, John Bickart's Clip Art for Demo II is included at no additional cost. **CALL TODAY!**

SRP: \$169

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Return Policies*

The Programmer's Paradise® return policy allows customers to open and review software documentation for a period of 30 days. Customers are permitted to return products within this 30-day time period provided the disk seals are not broken and the product is in resaleable condition.

All returns are subject to a \$20.00 handling fee and a 10% restocking fee per product. Please submit your request for a return authorization number. You will be mailed a Return Request Form that must be filled out and signed before the return authorization number is issued. This form will be mailed back to you. It must accompany the product being returned. (If the Return Request Form is not included in the return, credit can not be issued for the return. If products are not returned in saleable condition, they will be sent back to the purchaser.) In cases where the publisher's return policy differs from ours, we will generally honor the publisher's policy but Programmer's Paradise return fees will apply over and above the publisher's policy. In this section, each product listed has been given a code that reflects the return policy of the publisher. These codes are located at the bottom of each description. The explanation of the codes are as follows:

- F Full 30-day guarantee.** Product must be in saleable condition. Disk seals may be broken. If the documentation is not in saleable condition an additional 10% fee will be applied.
- L Limited 30-day guarantee.** DO NOT BREAK THE DISK SEAL. Product must be in saleable condition. If product does not have the disk seals customer must obtain prior approval from the publisher before product can be returned.
- N Not returnable unless granted prior approval from the publisher.** Customer must obtain return authorization number from the publisher before product will be accepted for return.
- O Other.** This code will be followed by a short statement specifying the nature of the return policy.

If no return code is listed by the product, you must have written confirmation from Programmer's Paradise on return requirements.

*Return policy subject to change without further notice.

DOS DEVELOPMENT SOFTWARE

386/486 TOOLS

ASSEMBLY

386 iDOS-Extender™ Software Development Kit 4.1 Phar Lap Software

The 386 iDOS-Extender Software Development Kit enables software developers to build 32-bit protected mode applications which break the 640K DOS barrier and access all the memory available in the machine—up to 4 gigabytes. Includes 386 iASM, an 80x86 assembler, 386 iLINK linker, the 386 iLIB librarian, a development version of 386 iDOS-Extender protected mode run-time environment, and 386 iDEBUG, a debugger for both real mode and 386 iDOS-Extender programs. Supports VCPI, XMS, DPMI, and all modes of Windows 3.0. 386 iDOS-Extender, which can be bound within the application, is invisible to the end-user.

List: \$495 Ours: \$435
FAXcetera #: 1490-0006 Return: F

C

C-scape 386 with Look and Feel 3.2 Liant Software

The C-scape Interface Management System that supports DOS extenders. It includes all the functionality of C-scape DOS (data entry and validation, windows, menus, text editing, context sensitive help, mouse and graphics support) and the Look & Feel Screen Designer and Code Generator. The Look & Feel Screen Designer is a free-form screen editor for designing and creating screens for C programs. It produces C source code for use with C-scape and can stand alone to simulate screen appearance and operation for prototyping purposes. Programs written with C-scape 386 can exceed the DOS 640K memory limitation, and are portable between DOS, OS/2, UNIX, VMS, and the X Window System. Supports Borland Turbo C, MetaWare High C 386, Microsoft C and Watcom C 386. Supports Ergo Computing OS/286 and OS/386 DOS Extender, Phar Lap 286 & 386 DOS Extender SDK and Rational Systems DOS 16/M DOS Extender.

List: \$999 Ours: \$899
FAXcetera #: 1952-0009 Return: F

High C/C++ for Extended-DOS 80386-486 3.0

MetaWare Incorporated
The High C/C++ compiler offers many advanced features not found in any other C++ compiler. The "Incremental Strengths" feature lets the developer specify the level of C++ compilation, allowing migration from C to C++ one C++ block at a time. C++ templates have been full implemented in this globally-optimizing compiler. MetaWare also holds the distinction of being the only 32-bit C/C++ compiler with floating-point

support for a full range of numeric coprocessors, including the Weitek ABACUS 1167, 3167, and 4167, as well as the Intel 80387, and 387 compatibles. Includes High C/C++ compiler, 32-Bit Source-Level Debugger, and MetaWare's 32-Bit Windows Application Development Kit.

List: \$795 Ours: \$669
FAXcetera #: 1590-0008 Return: L

WATCOM C9.0/386 WATCOM Group

Develop and debug 32-bit applications for extended DOS and Windows with the most complete 32-bit C development package available. C8.5/386 is packed full of tools you need to unleash 32-bit power on your applications at a low package price. You get the royalty-free DOS/4GW DOS extender by Rational Systems, components from Microsoft Windows SDK, award-winning compiler, protected-mode linker, interactive debugger, execution profiler, run-time compatibility with WATCOM FORTRAN 77/386 V8.5 (see separate description) plus numerous development tools. C8.5/386 also supports other industry standard 32-bit DOS extenders.

List: \$895 Ours: \$599
FAXcetera #: 1683-0001 Return: F

WindowsMAKER Professional for 32-bit code: WATCOM C8.5/386 and C9.0/386

Blue Sky Software Corporation
Object-oriented prototyping and development tool enabling users to design, test, and generate 32-bit graphical Windows applications by simply pointing and clicking. From tool palette select and place on-screen menus, icons, printers, scroll bars, dialog boxes, radio buttons, child and sibling windows, keyboard and mouse-controllable windows, and other graphical objects that comprise a Windows application interface. Generates the Windows .EXE w/exact, expert level, fully commented 32-Bit C source code and production files (CUA & SAA compliant). Test, preview and interactively make changes to the application before the source code is compiled. Custom code is preserved during code regeneration. (No royalties or runtime fees).

List: \$995 Ours: \$895
FAXcetera #: 2602-0006 Return: F

C Communications Toolkit/ Extended DOS

Magna Carta Software
All the features of C Communications Toolkit with additional support for DOS Protected mode communications. Supports the following compiler/extender combinations: Borland C++ 2.0,3.0 w/ Phar Lap 286 iDOS-Extender; Intel C Code Builder 386/486 w/Intel 386 extender; Metaware High C 386/486 w/Phar Lap 386 iDOS-Extender; Microsoft C 6.0a w/ Phar Lap 286/DOS-Extender; Watcom C 386 w/Rational Systems; Phar Lap 386 iDOS-Extender, Intel DOS Extender. Also supports all real mode compilers supported in C Communications Toolkit. Full source code. Full 30-day guarantee.
List: \$300 Ours: \$270
FAXcetera #: 1967-0004 Return: F

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See page 176 for
instructions
on how to use the
numbers listed below
each product.

DOS DEVELOPMENT SOFTWARE

FORTRAN

FTN77/386 2.60

EuroSoft, Inc.

FTN77 provides 4GB flat address space. It compiles and executes extremely fast (100,000 lines of FORTRAN in 5 min on a 386/33). Conforms to the ANSI FORTRAN77 standard and offers additional extensions (VAX). FTN77 includes a built-in profiler, and easy to use full screen debugger, a make utility and an extensive library with over 230 routines for windowing, mouse, graphics, etc. Windows 3.x fully supported.

List: \$1350 Ours: \$1215
FAXcetera #: 2304-0001 Return: F

FTN77/486 2.60

EuroSoft, Inc.

32-bit-Fortran compiler with the same features as 77/386; in addition, it exploits the special architecture of the 80486 chip doubling compilation and execution speed as compared to FTN/386 on the same system.

List: \$1745 Ours: \$1571
FAXcetera #: 2304-0002 Return: L

FTN77/ix

EuroSoft, Inc.

FTN77/ix is a 32-bit high performance FORTRAN77 compiler. It compiles and executes very fast. Runtime has globally optimizing or full checking options and profiler. Supplied with FORTRAN friendly command driven debugger and extensions to interface to C. NIST validated for ANSI conformance.

1-2 users:
List: \$1350 Ours: \$1215
unlimited users:
List: \$1695 Ours: \$1525
FAXcetera #: 2304-0003 Return: L

Lahey F77L-EM/32 4.0

Lahey Computer Systems

Industry leading 32-bit FORTRAN Language System includes Phar Lap's 386/DOS-Extender. This VCPI, XMS, and DPMI compliant extender enables users to access up to 4GB and operate in the MS Windows DOS box. The extender is royalty-free and includes virtual memory and support. New with Version 5.0: 32-bit debugger, arrays beyond 16MB, compression linker, and 486 optimizations. Support for popular VAX, IBM VS, and 90 features.

List: \$1390 Ours: \$1015
FAXcetera #: 1476-0004 Return: F

WATCOM FORTRAN 77/386 V9.0 for Extended DOS and Windows WATCOM

WATCOM FORTRAN 77/386 is ideal for porting applications from the mainframe to extended DOS and Windows. F77/386 conforms to the full ANSI FORTRAN 77 language, IBM's SAA FORTRAN language definition and support, VAX and Microsoft extensions. F77/386 is packed full of tools you need to unleash 32-bit power on your applications at a low package price. You get the royalty-free DOS/4GW DOS extender by Rational Systems, components from Microsoft Windows SDK, high-performance compiler, protected-mode linker, interactive debugger, execution profiler, run-time compatibility with WATCOM C8.5/386 (see separate description) plus numerous development tools. F77/386 also supports other industry standard 32-bit DOS extenders. You can also use F77/386 Professional to create ADS applications for AutoCAD or for embedded systems development.

List: \$895 Ours: \$719
FAXcetera #: 1683-0005 Return: F

PASCAL

Professional Pascal for Extended-DOS 80386-486 2.8

MetaWare Incorporated

MetaWare's Professional Pascal is designed for professional software developers. The compiler generates superior code and provides accurate error messages and excellent diagnostics. The compiler can be modified to suit specific needs by using a wide variety of toggles and pragmas. Professional Pascal supports a full range of numeric coprocessors including the Weitek ABACUS 1167, 3167, and 4167 chips, Intel 80x87, Cyrix FastMath, and Integrated Information Technology's 3C87.

List: \$795 Ours: \$716
FAXcetera #: 1590-0009 Return: L

Professional Pascal for DOS 80x486 2.8

MetaWare Incorporated

MetaWare's Professional Pascal is designed for professional software developers. The compiler generates superior code and provides accurate error messages and excellent diagnostics. The compiler can be modified to suit specific needs by using a wide variety of toggles and pragmas. Professional Pascal supports a full range of numeric coprocessors including the WEITEK ABACUS 1137, 3167, and 4167 chips, Intel 80x87, Cyrix FastMath, and Integrated Information Technology's 3C87.

List: \$495 Ours: \$446
FAXcetera #: 1590-0009 Return: L

Sheffield Pascal/386

EuroSoft, Inc.

32-bit extended memory high-performance ISO Pascal (plus extensions) compiler. Very fast compile-time speed. Excellent diagnostics at both compile and runtime. Bundled with free DOS extender, virtual memory manager, disk cache, linker, co-processor emulation and full screen debugger. Extensive run-time graphics library. Fully compatible with FTN77/x86 for mixed language programming.

List: CALL Ours: CALL
FAXcetera #: 2304-0004 Return: L

ADA LANGUAGE

Ada Graphics 4.3

AETECH, Inc.

AdaGraphics is an advanced graphics library for AETECH IntegrAda Ada compilers. Generates "C-like" graphics in Ada. Includes a broad spectrum of highly-optimized graphics tools for all PC-graphics modes. Composed of easy-to-use object-oriented Ada packages with data structures and program units for both low-level pixel functions as well as high-level presentation graphics. Read/Write PCX, Tiff & Dr. Halo Images. Animate bit-block graphic images.

List: \$695 Ours: \$626
FAXcetera #: 2358-0001 Return: N

IntegrAda 4.3

AETECH, Inc.

IntegrAda is a complete Ada Programming Support Environment for MS-DOS & POSIX. Quickly access language sensitive editor, powerful libraries, automatic code generation & error checking tools, validated compiler, pop-up training and referencing tools, design & documentation tools, and many other Ada specific tools with a simple hot-key or mouse click. Chosen by the US Air Force as the standard Ada products for the DESKTOP III contract.

List: \$395 Ours: \$356
FAXcetera #: 2358-0001 Return: N

ASSEMBLY LANGUAGE

ASSEMBLERS

Microsoft Macro Assembler 6.0

Microsoft Corporation

MASM 6.0 reduces coding time and simplifies code maintenance by including intuitive, high-level language constructs and language extensions. MASM 6.0's Microsoft Programmer's Workbench includes an editor, an assembler, a source-browsing facility, a project management utility, and on-line references. Whether or not you are writing programs completely in assembly language, MASM 6.0 is the ultimate environment for assembly-language development.

List: \$150 Ours: \$99
FAXcetera #: 1269-0010 Return: L

Turbo Debugger & Tools 2.0

Borland International

Borland has redefined optimization with Turbo Debugger & Tools 2.0 which includes Turbo Debugger 2.0, Turbo Profiler 1.0, and Turbo Assembler 2.0. Turbo Debugger now offers reverse execution to undo statements and instructions. Debug any size program with 286, 386 and remote debugging. Turbo Profiler measures your program and graphically shows you: where time is spent; how many times a line is executed; how many times a routine is called and by what routines; what files are accessed most often and for how long; and when and where the interrupts are called. Turbo Assembler 2.0 is 3 times faster than, and fully compatible with, MASM 4.0, 5.0, and 5.1. This multi-pass assembler generates optimized code with NOP squishing for 8086, 80286, 80386, and

80486. Requires 284K memory (356K for assembler).

List: \$150 Ours: \$113
FAXcetera #: 1861-0002 Return: O
Full 60 day guarantee.

DISASSEMBLERS

ADVANTAGE Disassembler

Lifeboat Software

A fast memory-resident program which gives programmers the ability to disassemble executable files (.EXE and .COM files) to produce comprehensive, well-documented assembly language source code. The programmer can add additional comments, make changes to code, define labels for subroutines, data areas or I/O port addresses, check conflicts in memory, or add more code before reassembling. Supports Intel math coprocessors, includes two tutorials providing example disassembly of .EXE and .COM files.

List: \$295 Ours: \$279
FAXcetera #: 0233-0001 Return: L

Sourcer 4.0

V Communications, Inc.

A commenting disassembler which automatically converts COM, EXE, device drivers, overlays, Windows VxDs, or RAM or ROM into clear commented assembly code. Built in code and data analyzers with code simulation produces incredible results. Disassembles 8088/86 through 80486, real and protected code. Includes automatic indexed call/jump analysis; descriptive labeling for BIOS & PSP areas; large file support; and more!

List: \$130 Ours: \$117
FAXcetera #: 1828-0001 Return: O
Full 30 Day Guarantee-Not Returnable
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IntegrAda is a complete Ada Programming Support Environment for MS-DOS and POSIX. Not just a validated compiler, but a complete programming system, including powerful libraries. Chosen by the U.S. Air Force as the standard Ada products for Desktop III.

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Reviewers Comments

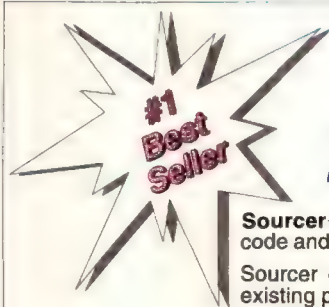
◆ "IntegrAda has the most versatile and complete APSE available for the PC."
Government Computer News

◆ "Welcome 'Turbo' Ada programming for the PC's." Al Today

◆ "IntegrAda's interface is the most dynamic-turbo-like and screen oriented...."
Government Computer News



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DOS & Windows Disassembly!

Sourcer™ generates commented assembly language source code and listings from executable files or memory.

Sourcer gives you the power to easily change and modify existing programs for which the source code is unavailable or lost. It also helps you learn and understand assembly code.

Unlike other disassemblers that produce "debug" style output, Sourcer performs an extensive analysis to generate clear assembly source code in the style similar to the original. Sourcer generates the best results of any 8088 - 80486 disassembler, automatically. Compare the output yourself and see the dramatic difference Sourcer makes.

"Sourcer is the best disassembler we've ever seen."

PC MAGAZINE

"V Communication's Sourcer is by far the best MS-DOS PC disassembler I have seen; it bundles more features and options than any other similar product."

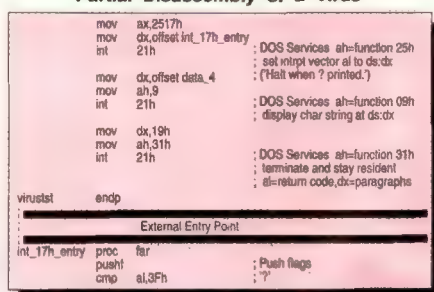
IEEE Software

"All in all, Sourcer does the best analysis of any of the disassemblers I tested and gets extra points for handling BIOSes and packed files (albeit at an extra charge)."

Programmer's Journal

DisDoc is a trademark of RJSwntek, Inc.

Partial Disassembly of a Virus



V Communications, Inc.

4320 Stevens Creek Blvd, Suite 275
San Jose, CA, 95129 FAX 408-296-4441
800-648-8266 or 408-296-4224

Partial List of Sourcer's Advantages

	Sourcer™4.5	DisDoc™4.0
Depth of Analysis		
Simulates code	yes	no
Auto segment sizing	yes	no
Supports MASM, TASM & Optasm	yes	partial
Emulated floating point interrupts	yes	no
Descriptive BIOS & PSP data labels	yes	yes
Descriptive Interrupt entry points	yes	no
Offset analysis	yes	partial
Interrupts		
Average comment size	65	28
Supports undocumented interrupts	yes	no
Describes all registers used for DOS interrupts	yes	no
Usage summary report	yes	no
Menu driven	yes	yes
Large file size support	yes	yes
Max. custom comment size (each)	64,000	32
Assembly ASM & listings output	yes	no
In-line cross reference	yes	no
Price	\$129.95	\$249.95
Optional Windows & OS/2 support	yes	partial
VxDs (Virtual Device Drivers)	yes	no
Inserts Windows API calls, by name	yes	no
Uses CodeView symbols	yes	no
Utilities for resources, header examination & export extraction	yes	no
Optional BIOS listing generator with extensive comments	yes	no
Optional Unpacker with utilities	yes	no

New! Windows Source™

Creates assembly listings for Windows EXEs, DLLs, VxDs & OS/2 files. Labels, by name, all exports and imported function calls, including all Windows API calls. Inserts CodeView symbols and much more! Only \$129.95. Requires Sourcer. Save \$30, order the complete package including Sourcer for only \$229.90.

COM 80486 Device Drivers 80386 EXE 80286 Windows VxDs 80186 Binary Files 80x87 BIOS 8088 TSRs

Sourcer w/BIOS Pre-Processor 4.0

V Communications, Inc.

All the features of Sourcer with the ability to generate detailed source listings for all BIOS ROMs in a system. It identifies entry points with detailed in-line comments, explains functions and sub-functions, register usage, and other key information. Provides highly descriptive labels such as "video_mode" and "int_9_keyboard". Fully automatic operation.

List: \$170 Ours: \$129
FAXcetera #: 1828-0002 Return: F,N

Unpacker 1.4

V Communications, Inc.

Unpacker assists with the debugging and disassembly analysis of software. It converts packed programs into runnable unpacked programs. It also allows the separation of attached overlay programs. Multi-segment COM programs can be converted back into real EXE type programs. Includes other utilities to simplify the viewing of interrupt vectors and for testing video operations.

List: \$40 Ours: \$36
FAXcetera #: 1828-0003 Return: F

LIBRARIES/UTILITIES

ASM Checker 1.05

V Communications, Inc.

A set of tools to automatically locate potential problems in assembler source code. Similar to LINT for C programmers, ASM Checker locates and explains potential logic errors in assembly source code. It also cross-references and type-checks external and public symbols across multiple source files. Works with all major assemblers including Microsoft's MASM and Borland's TASM, in both normal and ideal modes.

List: \$180 Ours: \$162
FAXcetera #: 1828-0006 Return: F

Spontaneous Assembly 2.1

Base Two Development

Spontaneous Assembly 2.1 is the complete assembly language library that makes real assembly language programming as easy as a high-level language. It contains over 800 ready-to-use, fully optimized language routines including: powerful TSR and device driver support; multi-tasking; state-of-the-art data compression; full-featured windowing; high-speed console I/O with 28/43/50-line and multiple/virtual screen support; formatted/scripted I/O; enhanced data conversion; advanced near/far/local heap management; 32/64-bit integer math; program and environment control; full memory model support; full access to your C compiler's floating point emulator; a 750+ page manual; and much more...all royalty free.

List: \$199 Ours: \$159
FAXcetera #: 2614-0001 Return: F

BAR CODING

Bar Code Library 2.3

The Strandware

A programmer's library, written in "C", that generates and prints bar codes from within your own program. Print over one dozen bar codes. Supports several languages such as Clipper, "C", QuickSilver, and QuickBASIC and other languages that can interface to C subroutines. Supports most printers. "Reader's Choice Award", Data Based Advisor, December 1990. Source included.

List: \$389 Ours: \$319
FAXcetera #: 2831-0002 Return: L

For return policy details see page 75.

Your Bar Code Library Is Overdue.

Check out Bar Code Library. A programmer's library from StrandWare that lets you print bar codes from within your own programs in minutes. It's fast. Easy to use. Works on most printers and operating systems. Saves you time since you don't have to write and maintain your own subroutines. And saves you money because you'll never pay royalties for library usage. With a price of only \$389 with source, the time is right to check out Bar Code Library! To order or for more information, call 1-800-552-2331 or Fax 1-715-833-1995.

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BASIC

COMPILERS

GFA-BASIC for DOS

GFA Software Technologies, Inc. GFA-BASIC lets you bring a graphical user interface to your DOS applications. Includes 500 systems commands and functions, and several hundred commands and functions for developing GUI. You won't need any additional tools for a "Window's feel" when you create DOS versions with GFA-BASIC. List: \$235 Ours: \$212 FAXcetera #: 3614-0001 Return: L

Microsoft BASIC Professional Development System 7.1

Microsoft Corporation All you need to create high performance BASIC applications. Now supports expanded memory specification (EMS) 4.0 and run-time overlays for creating large scale programs and smaller, faster executables. Includes ISAM database functions, Excel-style spreadsheet features, and routines for presentation graphics, matrix math, and user interfaces. Support for math coprocessor and emulation. Comes with Microsoft QuickBASIC. List: \$495 Ours: \$349 FAXcetera #: 1269-0023 Return: L

Microsoft Visual Basic for MS-DOS

Microsoft Corporation Visual Basic for MS-DOS, standard edition, gives you the benefits of advanced programming without the time investment of learning it. You can create exciting visual interfaces without leaving MS-DOS. Work with controls that have

built-in processing power—scroll bars that already know how to scroll and push-buttons that already know how to push. It's a part-time programmer's dream come true!

List: \$199 Ours: \$137
Comp. upgrade List: \$99 Ours: \$95
FAXcetera #: 1269-0039 Return: L

Microsoft Visual Basic for MS-DOS Professional Edition

Microsoft Corporation Create full-featured applications for MS-DOS visually with Microsoft Visual Basic for MS-DOS Professional Edition. You now have the freedom to develop for either MS-DOS or Windows with access to databases as large as 128 MB. It has all the productivity of MS VB for MS-DOS Standard Edition, plus an optimizing compiler for today's advanced processors. Now you can develop a powerful multiple-platform solution in record time!

List: \$495 Ours: \$337
Comp. upgrade List: \$199 Ours: \$189
FAXcetera #: 1269-0039 Return: L



Microsoft QuickBASIC 4.5

Microsoft Corporation The fastest, easiest way to program in a modern, structured way. Line numbers and GOTO's are out, having been replaced by all the power of a modern, structured language. Powerful features include DO/WHILE, CASE, recursion, SUBprograms (with local variables), user-defined datatypes (records), and the raw speed of a professional compiler and

linker. MS QuickBASIC will still run virtually all old GW-BASIC/BASICA programs at blinding speed. Program lines are compiled at over 15,000 lines per second. Learning MS QuickBASIC is easy with MS QuickBASIC Advisor, an on-line hypertext help system that gives detailed information instantly.

List: \$99 Ours: \$69
FAXcetera #: 1269-0024 Return: L

DATABASE

DATABASIC 1.01

Blue Rose Software, Inc. Designed by and for BASIC users. B-trees. Hash key indexing with average 1.6 I/O seek time. Multiple keys per file. Multiple fields per key. No packing. Automatic index updates. 4 gigabytes files. Top rated manual. Design tool. Works with QB, VB and PDS. Fast and compact, DATABASIC is the definitive tool for the serious BASIC programmer.

List: \$249 Ours: \$224
FAXcetera #: 1002-8701 Return: L

db/LIB Professional Database Library 2.0

AJS Publishing A linkable library of assembly routines enabling MS BASIC PDS to perform genuine database management using industry database (DBF) and index (NDX) files. Index routines provide fast keyed-file access in any specified order. db/LIB's built-in expression evaluator validates input, processes record selection queries, and dynamically formats data for output. Includes 12 file management programs that perform the ordinary tasks of database management.

List: \$189 Ours: \$170
FAXcetera #: 2113-0004 Return: L

GRAPHICS

GraphPak Professional 3.1

Crescent Software Includes scientific graphs, scatter plots, financial graphs, and the ability to display multiple fonts simultaneously. Also needed are text-based bar charts which can be displayed very quickly and routines for loading and saving PCX graphics files. Dump graphics from any screen to HP Laserjet or Epson printer. All BASIC and assembler source code is provided. Specify compiler. Requires 256K memory.

List: \$149 Ours: \$135
FAXcetera #: 1572-0010 Return: L

LaserPak 2.0

Crescent Software A complete set of BASIC subroutines for controlling an HP Laserjet or compatible laser printer. Modelled after the BASIC graphics commands, LaserPak allows BASIC programs to quickly and easily draw lines, boxes, circles, symbols and fill patterns. Other capabilities include graph scales and grids, text labeling and complete control over all of the Laserjet control sequences. LaserPak also includes a sophisticated symbol editor that can be used to design and manage logos, symbols, clip-art, and custom fonts. A complete demonstration program is provided that shows all of the LaserPak features in context. All BASIC and assembler source code is included.

Specify compiler: Microsoft QuickBASIC 2.0, 3.0, 4.0, 4.5 or Borland Turbo BASIC 1.1 or later. Requires 256K memory. List: \$149 Ours: \$139
FAXcetera #: 1572-0011 Return: L

Boost your Basic with ProBas™ 5.5!

New ProBas 5.5 boosts your BASIC programs into orbit!

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- ToolKit - menus, dialog, BTree, EXE patch...
- ProMath - 150 math/stat/physics/graph functions
- HyperHelp - hypertext toolkit & help system

- ProRef - on-line ProBas manual
- ProFont - Screen font library - rotate, color, size fonts
- TeleComm - telecomm & terminal emulations
- Financial Library - interest/bond/cashflow calculations

TeraTech, Inc.
Tools for Programmers

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Rockville, MD 20850
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BBS: (301) 963-7478



DOS DEVELOPMENT SOFTWARE

ProFont TeraTech

Over 24 graphic screen fonts in 6 scalable typefaces. Display text in any graphic mode screen including 800x600 super VGA. Fonts can be rotated, scaled and precisely positioned at the pixel level. No royalties. Requires QuickBASIC, PDS BASIC 7 or VB or DOS.

List: \$125 Ours: \$113
FAXcetera #: 1972-0010 Return: F

LIBRARIES

P.D.Q. 3.0 Crescent Software

Create BASIC programs that are smaller and faster than ever dreamed possible. Imagine a DOS "filter" program taking 1400 bytes of memory or a TSR printer set-up utility in only 3K. TSR and interrupt handling are built directly into the P.D.Q. library. P.D.Q. is a complete replacement for the BCOM libraries included with QuickBASIC, BASIC 6.0 and 7.0, and is perfect for writing small applications and TSR utilities, where program size and execution speed is critical. Alternate libraries are provided for creating 80286- and 80386-specific applications. All source code is included. Requires 256K memory and Microsoft QuickBASIC 4.0 or later.

List: \$149 Ours: \$134
FAXcetera #: 1572-0004 Return: L

PDQCOMM 2.5 Crescent Software

Adds serial communications to BASIC programs. Supports Com ports 1-4, and hardware and software handshaking. Uses syntax nearly identical to BASIC for fast integration and minimal learning curve. Features XMODEM and ASCII File Transfers, many terminal emulations. Requires Microsoft BASIC 4.0 or later.

List: \$99 Ours: \$89
FAXcetera #: 1572-0009 Return: L

ProBas 5.5 TeraTech

ProBas has 938 routines to make your programs faster and more professional. Includes routines for: virtual screens, a complete GUI, file compression, extended/EMS support, improved file I/O, mouse, windowing, sorts, string and numeric, hundreds more...1200 pages of docs. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS. Hard disk required. 3-5 MBS space.

List: \$195 Ours: \$169
FAXcetera #: 1972-0004 Return: F

ProBas HyperHelp Toolkit 1.0 TeraTech

Hypertext engine allows you to put full manuals on line with full search abilities. Specify single or multiple windows, and window color and placement. User can move and resize window, use mouse or keyboard, and use up to 40 bookmarks to move between links. Hypertext can be created from any ASCII text. Requires ProBas library. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS. Hard disk requires 1MBS space.

List: \$125 Ours: \$113
FAXcetera #: 1972-0001 Return: F

ProBas Toolkit 2.11 TeraTech

High level routines for menus, windowing system with four-way scrolling and other features, word-wrap input, BCD math, .EXE pathing, character definition, fast B-tree indexing and more. Extensive docs and BASIC source code included.

Requires ProBas library. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS.

List: \$125 Ours: \$113
FAXcetera #: 1972-0002 Return: F

ProMath Math Library 1.0 TeraTech

A collection of 150 mathematical functions and routines. Included are trigonometric, hyperbolic, Airy, factorial, gamma, error, beta Fresnel, and Bessel functions. Also, included are statistics, matrix operation, functions, FFTs, roots of equations, graphics and more. No royalties. Requires Quick BASIC, BASIC PDS 7, or VB for DOS. Hard disk required. 1 MB space.

List: \$125 Ours: \$113
FAXcetera #: 1972-0003 Return: F

Telecomm Toolkit 1.11 TeraTech

Routines for XMODEM, MODEM7, Batch YMODEM, and YMODEM batch file transfer; VT52, VT100 and ANSI-BBS terminal emulation; baud rates up to 15200 bps; command processor; script language; dialing directory; autodialing; and pop-up menus and status windows. Full commented BASIC source code included. Requires ProBas library. No royalties. Requires QuickBASIC or BASIC PDS 7 or VB for DOS. Hard disk required.

List: \$75 Ours: \$68
FAXcetera #: 1972-0007 Return: F

QuickComm 2.0 Software Interphase, Inc.

A communications library that supports up to 16 serial ports simultaneously, including: COM1-COM4 generic boards; Digital Board PC/x series; or your own configuration. Also supports boards containing 16550 chip. QuickComm is totally interrupt-driven and written in assembly. It supports: XMODEM; XMODEM-CRC; YMODEM and YMODEM-Batch file transfer protocols; XON/XOFF and CTS/RTS flow control; powerful string input/output/filtering; event trapping for characters received and RS-232 signal changes (using BASIC's ON EVENT); complete with Hayes-modem routines; and more. QuickComm comes with a well-documented manual and several example programs including a multiport, window based, mouse driven terminal program. No TSR is required when QuickComm is linked with your programs. Supports Microsoft BASIC 7.x and QuickBASIC compilers, and Turbo C/C++ and Microsoft C/QuickC. Must specify C or BASIC version. Software Interphase will send the QuickComm source code to you upon receipt of the registration card. Full 30 day guarantee. Not available to customers in Austria, Germany or Switzerland.

List: \$149 Ours: \$135
w/source:
List: \$249 Ours: \$199
FAXcetera #: 1767-0001 Return: L

QuickPak Professional 4.0 Crescent Software

The most comprehensive set of extensions and tools for use with compiled BASIC. Includes a complete collection of financial and mathematical functions, video services that automatically accommodate any of the text screen modes and display sizes, assembler calls to search and sort arrays, and insert or delete elements. Also included are assembler routines for fast string manipulation, DOS services that eliminate the need for ON ERROR, pop-up calculator, calendar, ASCII chart, editor and spreadsheet, plus many menuing routines. BASIC and assembler source code included. Specify compiler:

Microsoft QuickBASIC 2.0, 3.0 or 4.0. Requires 256K memory.

List: \$199 Ours: \$159
FAXcetera #: 1572-0001 Return: L

QuickPak Scientific 3.0 Crescent Software

QuickPak Scientific adds sophisticated numerical methods to your programs, including routines for solving linear algebra, differential equations, curve fitting, complex numbers, statistics, vectors, matrices, integration and differentiation, fast Fourier transforms, non-linear equations and more.

List: \$149 Ours: \$135
FAXcetera #: 1572-0012 Return: L

SCREENS/WINDOWS

Designer QuickWindows 1.5 Software Interphase, Inc.

Designer QuickWindows is a companion "CAD" program for QuickWindows Advanced. Hit CTRL-D from inside the QuickBASIC environment to run Designer. Use the mouse or keyboard to lay out the windows, dialog boxes, and data-entry screens. When you are finished, Designer will write BASIC source code for that screen and merge it into your program.

List: \$69 Ours: \$62
FAXcetera #: 1767-0002 Return: F

ProScreen Screen Management 1.0 TeraTech

Screen painter for 80x25 or 809x43 screens, good color control, edit three screens at a time, up to 130 fields per screen, 19 predefined and user-defined masks. No royalties. Requires Quick BASIC or BASIC PDS 7. Hard disk required. 1 MB space.

List: \$99 Ours: \$89
FAXcetera #: 1972-0008 Return: F

QuickMenu 3.2 Crescent Software

A full-featured DOS menu system. Define the menu titles, the list of DOS commands to be executed for each, and these will be executed automatically. Unlike other DOS menu programs, QuickMenu does NOT remain memory resident while executing a program. QuickMenu features: up to 9 commands per menu; unlimited menus; full screen command editor; and context sensitive help. File import and export capability lets you bring in existing batch files or create new ones. QuickMenu provides full control of colors on CGA/EGA/VGA text screens with user defined color schemes and background patterns for each menu. QuickBASIC 4.0 source code included. Requires 256K memory. 3 1/2" diskettes are available.

List: \$59 Ours: \$53
FAXcetera #: 1572-0002 Return: L

Quick Screen 4.0 Crescent Software

The most sophisticated screen management software ever developed. With its powerful screen painter, designing screens is a snap. Draw text and backgrounds, define data entry fields, and manage screen libraries that contain dozens of screens in a single file. A unique feature lets you optionally write screens to an object file, which is linked with your program and called by name. Additional features include routines for field by field editing with full data validation, on-line help, 17 field types, and automatic field calculations. Simply enter the formulas using ordinary BASIC equations, and Quick Screen does the rest. All BASIC source code included. Requires Microsoft QuickBASIC 4.0 or later. Requires 256K memory (512K recommended).

List: \$149 Ours: \$135
FAXcetera #: 1572-0003 Return: L

QuickWindows Advanced Software Interphase, Inc.

QuickWindows Advanced provides you with a complete set of user interface routines that work in 26 text and graphics modes through Super VGA. With QuickWindows Advanced, you create windows (exploding and shadowed), multi-tasking pop-up and pulldown menus, contact-sensitive help windows, pick lists, message boxes, data entry forms with picture fields and dialog boxes. All interface elements are keyboard and/or mouse driven. QuickWindows Advanced contains a full-featured icon and font editor. QuickWindows comes with many example programs. No TSRs are required to use Quick Windows. The QuickWindows Advanced Corporate Platform includes QuickWindows Advanced with assembly language source code, Designer QuickWindows, FREE automatic updates and telephone technical support for one year.

List: \$149 Ours: \$134
w/assembler source code
List: \$349 Ours: \$314
corporate
List: \$399 Ours: \$339
FAXcetera #: 1767-0003 Return: F



For 24 hour instant product information try FAXcetera®
See page 176 for instructions on how to use the numbers listed below each product.

DOS DEVELOPMENT SOFTWARE

ADDITIONAL PRODUCTS

Don Malin's Cross Reference Program (XREF) 2.20

Crescent Software, Inc.
A sophisticated cross-reference utility for fully documenting an entire application. It lists all variables, arrays, constants, and procedures alphabetically by type and scope, even across separate modules. A unique call-tree report identifies your procedures showing who called what, which routines are present but never accessed, and more. XREF also contains the string to code (STR2CODE) utility which relocates literal strings out of BASIC's DGROUP.

List: \$59 Ours: \$55
FAXcetera #: 1572-0008 Return: L

ProRef 5.0

TeraTech

ProRef product provides on line help from QB/QBX for all 938 routines in ProBas. Cut and paste program examples into your program! No royalties. Requires QuickBASIC or BASIC PDS 7. Hard disk required. 1MBS space.

List: \$50 Ours: \$45
FAXcetera #: 1972-0006 Return: F

ProRef for Toolkit 2.0

TeraTech

Provides on-line help from QB/QBX for all routines in ProBas Toolkit. Cut and paste examples into your program! No royalties. Requires QuickBASIC or BASIC PDS 7.

List: \$50 Ours: \$45
FAXcetera #: 1972-0006 Return: F

QB Plus 1.0

Crescent Software

Unique add-in expands capabilities of QB and QBX environment. Allows any compile and link options to be specified. Features superb memory viewer, execution profiling (timing), keyboard macros. Shell from QB to other programs with full DOS memory available. Requires MS BASIC version 4.5 or later.

List: \$59 Ours: \$53
FAXcetera #: 1572-0015 Return: L

QuickHelp 1.21

Crescent Software

A complete help message system that lets you add instant pop-up help to any application. Features include indexed file access for fast retrieval, user-definable hot key and customized colors. It accommodates the 25, 43 or 50 line display modes automatically. Includes compiler for creating unlimited help screens. QuickHelp requires only 22K of DOS memory — less than 1/3 needed for most other on-line help packages.

List: \$59 Ours: \$53
FAXcetera #: 1576-0006 Return: L

Visual Librarian 1.0

Software Interphase Inc.

A flow-chart based, point-and-click approach to managing from simple to complex Quick and Link Libraries for Microsoft QB or PDS. Allows you to create or modify libraries by including object modules, link libraries, function names, and by scanning BASIC source code. It will also resolve external references and search all link libraries for specific procedures. Other features include: context sensitive help system throughout, formatted reports for Libraries, with publics and externals listed, interactive Whereis Utility, mouse support, object module extraction. Includes manual and 5 lesson tutorial section. Supports Microsoft QuickBASIC 4.x and Basic PDS 7.x. 3.5" diskettes are available to registered users.

List: \$99 Ours: \$89
FAXcetera #: 1767-0005 Return: F

C LANGUAGE

COMPILERS

Instant-C 5.0

Rational Systems

The Instant-C professional programming environment integrates the edit-compile-link-test cycle in one powerful, high performance programming tool. It offers C programmers significant productivity gains by combining an incremental compiler and linker with automatic static and runtime error detection e.g. use of uninitialized pointers, source level debugging, interactive C expression evaluation including macros, cross referencing and browsing, single function or partial program execution and support of programs up to 16MB. Instant-C is compatible with Microsoft C source and libraries, allowing programmers to develop using Instant-C and then produce production code using Microsoft C. Instant-C is compatible with commercial object code libraries in medium or large model.

List: \$495 Ours: \$440
FAXcetera #: 1067-0001 Return: F

Microsoft QuickC 2.5

Microsoft Corporation

An integrated development environment for C that includes a seamlessly integrated editor, incremental compiler, incremental linker, NMAKE program maintenance utility and sophisticated source-level debugger. It is designed for programmers who want to learn C, yet demand a powerful development system. Its focus is on ease of mastery. QuickC 2.5 makes the learning curve as short as possible with its QC Advisor, an on-line, hypertext-based reference system on the environment and the language, extensive program examples, and C For Yourself, an easy-to-read book that guides the new C programmer from the foundations of the language to the advanced unique features of QuickC. On-line context sensitive hypertext-based help, easy menus and computer based training make it easy to learn and use.

List: \$99 Ours: \$69
FAXcetera #: 1269-0008 Return: L

Microsoft QuickC Compiler with QuickAssembler 2.5

Microsoft Corporation

QuickAssembler provides a powerful extension to QuickC, providing a fully-integrated MASM development system into the QuickC integrated environment. The QuickAssembler Programmer's Guide provides the instruction you need to have you integrating Assembler into your C code faster than ever before. This is the first integrated environment for Assembly language! Integrated assembly routines greatly enhance the speed of your code.

List: \$199 Ours: \$139
FAXcetera #: 1269-0009 Return: L

WATCOM C9.0

for DOS, Windows and OS/2

WATCOM

WATCOM C9.0 generates 16-bit applications to run in today's leading PC operating environments. Widely-acclaimed for outstanding code generation, C9.0 generates fast, tight and reliable code. The powerful interactive debugger supports DOS, Windows and OS/2 applications using single monitor, dual monitor and remote debugging capabilities. 100% ANSI C and IBM SAA conformance simplify porting issues. Other significant features include:

protected-mode compiler and linker, object module convert utility to industry standard debugger formats, dynamic overlay manager, execution profiler, graphics library plus numerous development tools. Runtime compatible with WATCOM FORTRAN 77 V9.0 (see separate description).

List: \$495 Ours: \$435
FAXcetera #: 1683-0003 Return: O
60 day guarantee

INTERPRETERS

C-terp (MS-DOS) 3.5

Gimpel Software

C-terp is not just a C interpreter but a powerful professional debugging and development environment. It features full K&R support with ANSI extensions, a full screen, built in, reconfigurable editor, incredibly fast semi-compilation, complete multiple module support, automatic make file, global search, 8087 support, preprocess facility, system shell, trace, batch mode and complete full-screen source level interactive debug facilities. To create a truly customized development environment, link in your assembler routines, libraries compiled with the large memory model of your Microsoft compiler under MS-DOS, and anything else compatible with your compiler. Use our batch file to link in your compiler and external libraries. For very large applications use our software paging, shared symbols option and direct access to extended or expanded memory. For Microsoft C List: \$299 Ours: \$239
C-terp 386 List: \$398 Ours: \$319 (specify High C or WATCOM 386)

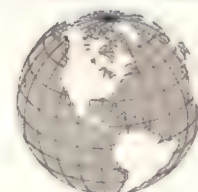
FAXcetera #: 1247-0003 Return: F

CAD/CAM

CAD/CAM Developer's Kit/2D 2.0 Building Block Software

The CAD/CAM Developer's Kit/2D is a collection of C functions which perform 2D CAD/CAM operations. These operations include: point and curve construction and editing, point and curve display in viewports (adaptable to any graphics library or environment), and DXF input and output. The types of geometry supported by the 'CAD/CAM Developer's Kit/2D are: point/vector, line, arc/circle, ellipse, non-uniform rational B-spline (NURB), and polycurve (end-to-end sequence of lines and arcs). Supports lists which simplify programs which process batches of geometry. CAD/CAM Developer's Kit/2D is a subset of the "CAD/CAM Developer's Kit/3D".

List: \$ 499 Ours: \$449
w/source List: \$ 998 Ours: \$898
Professional List: \$ 999 Ours: \$899
w/source List: \$1998 Ours: \$1799
FAXcetera #: 2809-0002 Return: O
Source code version not returnable.



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What are the CAD/CAM Developer's Kits?

The CCDKs are libraries of C functions which support standard CAD/CAM features such as reading and writing DXF files, constructing, editing and graphically displaying 2D and 3D CAD geometry, and computing numerical control toolpaths.

What can the CCDKs be used for?

For many types of programs and software products that need vector based graphics... CAD/CAM... mapping... GIS... A/E/C... motion control... desktop publishing... robotics ...

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What are CCDK users saying?

"We saved at least six months of development"
Gaetano Tavano, President, STLD Italy

"Using CCDK we went from specification to working program in just two days"
John Pentecost, Software Engineer, Bay State Technologies

"The CAD/CAM Developer's Kit saved me 500+ hours"
Randall Maynes, Robotics Consultant

What platforms are CCDKs used on?

Many including DOS, Macintosh, UNIX, CADKEY CDE, AutoCAD ADS, Windows 3.x and Windows NT.

What do the CCDKs cost?

Kit prices through Programmer's Paradise start at \$ 449.
Source code, maintenance and site licenses are available.



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CAD/CAM Developer's Kit/3D 2.0 Building Block Software

The CAD/CAM Developer's Kit/3D is a collection of C functions which perform CAD/CAM operations. These operations include: 2D and 3D point and curve construction and editing, point and curve display in viewports (adaptable to any graphics library or environment), and DXF input and output (full AutoCAD Release 11 support). The types of geometry supported by the CAD/CAM Developer's Kit/3D are: point/vector, line, arc/circle, ellipse, non-uniform rational B-spline (NURBS), and polycurve (end-to-end sequence of lines and arcs). All types of geometry are supported in both 2D and 3D. In addition, CAD/CAM Developer's Kit/3D supports lists which simplify programs which process batches of geometry. All of the functions in the CAD/CAM Developer's Kit/2D and the CAD/CAM Developer's Kit/DXF are included in this product.

List: \$999 Ours: \$899
w/source List: \$1998 Ours: \$1799
Professional List: \$1798 Ours: \$1618
w/source List: \$3598 Ours: \$3238
FAXcetera #: 2809-0004 Return: O
Source code version not returnable.

CAD/CAM Developer's Kit/DXF Personal 2.0

Building Block Software
A collection of C functions which read and write DXF files. It supports all AutoCAD Release 10 entity types, including: LINE, ARC, CIRCLE, POLYLINE (curves); TEXT and DIM; INSERT; ATTDEF and ATTRIB (insert attributes). All information is in 3D format. Also provides access to all: Header variable, table entries, and blocks. Block inserts may be exploded to any nesting depth. For applications that must process large files, the CAD/CAM Developer's Kit/DXF supports one-at-a-time or partial reading and writing. Using these features, an ordinary executable running in 640K / DOS can access all information in any DXF file, even if its 5MB in size!

List: \$599 Ours: \$525
w/source List: \$1198 Ours: \$1078
Professional List: \$1199 Ours: \$1079
w/source List: \$2498 Ours: \$2249
FAXcetera #: 2809-0003 Return: O
Source code version not returnable.

TG-2D 4.0

Disk Software, Inc.
A 2D CAD/CAM/CAE Developers kit. Over 300 2D geometric and graphic routines for CAD/CAM/CAE and Graphics applications. Includes curves (NURBS, Bezier, B-Spline, Catmull-Rom, Quadratic, Conic routines). Intersection, unions and differences of polygons. Composite 2D transformations (Rotate, Scale, Shear, Translate, Mirror). Surface area calculations. Vector computations and error handling and many more. DXF input and output. Graphic support for MSC and BGI graphics. Includes TG-Utilities v.1.0, manuals, example programs and source.

List: \$300 Ours: \$270
FAXcetera #: 1768-0002 Return: F

TG-3D 4.0

Disk Software, Inc.
A 3D CAD/CAM/CAE Developers kit. Over 300 3D geometric and graphic routines for CAD/CAM/CAE and Graphics applications. Includes curves (NURBS, Bezier, B-Spline, Catmull-Rom). Surface normals and tangents. Hidden line removal. 3D volume and polygon

clipping. 3D Composite transformations (Rotation, Scale, Translate, Mirror and Inverses) and more. DXF input/output. MSC and BGI graphics support but not required to use geometric routines. TG-Utilities 1.0, example programs and source included.

List: \$300 Ours: \$270
FAXcetera #: 1768-0003 Return: F

TG-Professional 4.0

Disk Software, Inc.
A 2D/3D CAD/CAM/CAE Developers kit. TG-Professional is a combination of TG-2D, TG-3D and TG-Utilities. Over 700 geometric and graphic routines which support device independent geometry and CGA/EGA/VGA graphics devices. Draw 2D objects such as chorded arcs, circles, ellipses, parabolas, hyperbolas, curves and more. Draw 3D objects such as lines, spheres, cylinders, pyramids, prisms, parallelepipeds, ellipsoids, 3D curves and surfaces. Supports MSC and BGI graphics drivers. Manual, example programs and source included.

List: \$500 Ours: \$450
FAXcetera #: 1768-0005 Return: F

TG-Utilities 1.0 Disk Software, Inc.

TG-Utilities library has general utility routines that perform link list management, GUI, graphics, general purpose math, and list processing routines. Create pulldown menus, pop-up dialog boxes, message windows, and more. DXF input and output to release 10. Read and write AutoCAD DXF file entities: header variables, table entries, block definitions and the entry types: LAYER, STYLE, VIEW, LINE, ARC, POLYLINE, FACE3D, TEXT, ATTRIB and DIM. Manual, example programs, and source included.

List: \$200 Ours: \$180
FAXcetera #: 1768-0004 Return: F

CODE GENERATORS

dANALYST Gold 6.0

Buzzwords International Inc.
A complete multi-user development environment for the C programmer. Standard features include complete source code generation for Microsoft Windows SDK including relational DBMS interaction with full SQL client-server capabilities. The Applications Designer is used to create source screens that make calls to Video Libs and DBMS calls to create complete applications, not just video I/O. Directly supports Intel 386/486 C Code Builder. Includes the SoftC DBMS Lib for C access to dBASE files and Buzzwords Pro Video Library. Supports FairCom C-Tree, Novell Btrieve and XQL Manager, Raima db_Vista and other Engines. Executes source code analysis and reformatting to user defined standards. Produces Files Tree chart to represent flow of your application. Creates modular and global cross references of #define locations, variables, and functions. Supports Header file processing and preprocessing. Menu designer creates standard, bar, pulldown, push-button, and push-button-pulldown menus. Includes 350 Windows icons, Paint Shop for Windows screen capture and file type conversion, and Listicon for displaying Windows icons from DOS.

SPECIAL OFFER!

List: \$495 Ours: \$79
FAXcetera #: 1873-0001 Return: N

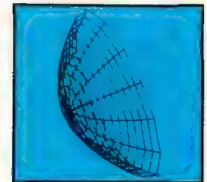
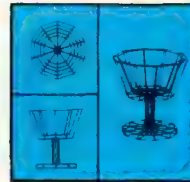
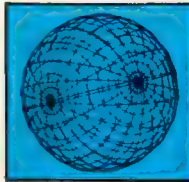
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DETAILS
TURN TO PAGE 75.**

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Invest in TG-Professional v.4.0, "The Ultimate CAD/CAM/CAE Programming Engine" today and slash your development time. Save both man-hours and money. TG-Professional v.4.0 consists of TG-2D, TG-3D and TG-Utilities Development Kits. For more information about our products see our listing in this catalog. Compatible with MSC, Borland C/C++ and the 32-bit power of WATCOM C/386 and MetaWare C/C++. We have the right programming tools for you.

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Layout 2.13

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Layout is a tool that allows you to build programs without writing code. You build programs by arranging objects in a flowchart. Layout has objects that handle user-interfaces (windows, menus, graphics and buttons), mathematical functions, program control and working with hypertext databases. Your flowchart will be transformed into C, PASCAL, QuickBasic, or a ready to run .EXE. Layout is designed for IBM PCs or compatibles with 640 RAM, a hard disk, three megabytes of hard disk space, DOS Version 3.0 or above, and a supported graphics card: CGA, EGA, VGA, HGA, Toshiba 3100, AT&T 6300, MCGA. A mouse is supported, but not required. Layout supports Turbo Pascal (5.5), Microsoft C (5.0 thru 6.0), Lattice C (6.0), QuickBASIC (4.5) and TURBO C (2.0). Layout comes with all of the language engines built in. Layout-created programs can work on any standard IBM PC equipped with a graphics card and as little as 256K memory and a floppy disk. List: \$300 Ours: \$270 FAXcetera #: 2919-0001 Return: O Free and unlimited returns of damaged goods.

PRO-C with Workbench 2.01

PRO-C Limited

PRO-C is a C Source Code Application Generator. It produces standalone database applications for PARADOX, CODEBASE 4, C-ISAM, BTRIEVE, ORACLE and other database engines. PRO-C generates screens, reports, menus and batch processing programs to run on UNIX, QNX and DOS systems.

SPECIAL OFFER!

List: \$795 Ours: \$99 FAXcetera #: 1983-0001 Return: F

COMMUNICATION LIBRARIES/UTILITIES

BreakOut-II 3.20

South Mountain Software, Inc.

BreakOut-II turns your PC into a full function RS-232 serial analyzer. The software allows you to capture or send data (Hex or ASCII) on COM1 or COM2, while you control and monitor line signals at baud rates up to 115K. Includes AutoBaud detection, NS16550 support, many display methods (ASCII, Hex, EBCDIC,...), instant help, line test, continuous data generation and macros. Test on any COM port or tap in between an existing communications circuit. Data can be stored and loaded to or from a file, checksum evaluated (XOR, summation, and CRC16), re-transmitted, and examined or modified with an easy to use screen editor. Also included is the ability to do protocol analysis on captured data (CALC and CRC-16) in any format desired. You can even write your own protocol. Includes cable and toolkit.

List: \$249 Ours: \$225 FAXcetera #: 2089-0005 Return: F

C Asynch Manager 3.1

Blaise Computing Inc.

C Asynch Manager is a comprehensive set of routines that allows you to build asynchronous communications capabilities into C programs. You can set port options, capture data reliably, command modems, transfer files, and detect and recover from exceptional conditions. Protocols include X, Y, ZMODEM, and XON/XOFF. Supports Hayes compatible modems and the 16500 UART. Supports Microsoft C/C++, and Turbo and Borland C++.

List: \$219 Ours: \$175 FAXcetera #: 1652-0005 Return: F

C Communications Toolkit

Magna Carta Software, Inc.

U(S)ART support: 8250/16450/16550A, Z-80 SIO, any port address and IRQ. Speed to 115,200bps. Protocols: ASCII, XMODEM/CRC/1k, Kermit, YMODEM, XMODEM-g, ZMODEM. Emulations: ANSI3.64, VT52/100, IBM ANSI.SYS.. Flow Control: RTS/CTS, DTR/DSR, XON-XOFF. Full modem support. Fully interrupt-driven. Buffers up to 64K. FAX support: All CAS compatible FAX cards. Extensive manual.

List: \$150 Ours: \$135 FAXcetera #: 1967-002 Return: F

Essential Communications 4.0

South Mountain Software, Inc.

Essential Communications is a powerful asynchronous communications library stressing reliability and ease of use. Supports interrupt driven communications on both the receive and transmit sides at speeds up to 115,200 baud. Includes support for up to 34 ports with buffers to 500K. It also provides support for V.32, MNP and Hayes compatible modems as well as XON/XOFF, XMODEM (CRC and Checksum), XMODEM 1K, YMODEM, KERMIT and ZMODEM protocols. Also provides ANSI and VT 52/100 terminal emulations. When used with our /*resident_C*/ software you have the ability to write background communication applications. Contains all source code, a comprehensive manual, a BBS demo and an ANSI compatible terminal emulator demo. No royalties.

List: \$329 Ours: \$296 FAXcetera #: 2089-0006 Return: F

Greenleaf CommLib™ 3.20

Greenleaf Software, Inc.

The premier communications library loaded for true interrupt driven async communications. Features X and YMODEM FAMILY, ZMODEM, KERMIT, RTS/CTS and XON/XOFF protocols. Supports up to 35 serial ports with non-intelligent or intelligent multiport boards, 115K, 286 DOS extenders (Rational/PharLap), network modem access (Sparkle/Modem Assist), and INT 14 BIOS/EBIOS. Includes PDQPlus Online Help Engine and help file. Full source. No royalties. Supports MS C, Zortech, WATCOM, Turbo C, Turbo C++, Borland C++ and TopSpeed.

List: \$359 Ours: \$305 FAXcetera #: 1035-0007 Return: L

Greenleaf ViewComm™ 3.0

Greenleaf Software, Inc.

A full-featured software serial data analyzer. See what's happening on the RS-232 serial port in great detail. Monitor mode examines data flow between a pair of communicating devices, capturing data, status and modem signals (graphical display) plus timestamps to a buffer, disk file or both and displays it live! Source Mode lets you interface-send data to either device from the keyboard or file while observing responses. Triggers can be set (wildcards allowed), push to DOS and displays of hardware/software flow control. View data up to 115,200 baud in ASCII, EBCDIC, HEX, OCTAL, DECIMAL, BAUDOT and binary.

List: \$399 Ours: \$305 FAXcetera #: 1035-0006 Return: F

QuickComm 2.0

Software Interphase, Inc.

A communications library that supports up to 16 serial ports simultaneously, including: COM1-COM4 generic boards; Digital Board PC/x series; or your own configuration. Also supports boards containing 16550 chip. QuickComm is totally interrupt-driven and written in assembly. It supports: XMODEM; XMODEM-CRC; YMODEM and YMODEM-Batch file transfer protocols; XON/XOFF and CTS/RTS flow control; powerful string input/output/filtering; event trapping for characters received and RS-232 signal changes (using BASIC's ON UEVENT); complete with Hayes-modem routines; and more. QuickComm comes with a well-documented manual and several example programs including a multiport, window based, mouse driven terminal program. No TSR is required when QuickComm is linked with your programs. Supports Microsoft BASIC 7.x and QuickBASIC compilers, and Turbo C/C++ and Microsoft C/QuickC. Must specify C or BASIC version. Software Interphase will send the QuickComm source code to you upon receipt of the registration card. Full 30 day guarantee. Not available to customers in Austria, Germany or Switzerland. 1.5 lbs.

List: \$149 Ours: \$135 w/source: List: \$249 Ours: \$225 FAXcetera #: 1767-0001 Return: F

SilverComm "C" Async Library 3.1

SilverWare, Inc.

Interrupt driven asynchronous communication library. Baud rates up to 115K, unlimited number of ports, Device Event monitors, Background timers, Huge Model Queues, Direct Video Functions, Table Driven Design and Terminal Emulation.

List: \$249 Ours: \$199 FAXcetera #: 1678-0003 Return: O Unconditional Money-Back Guarantee

View232 1.1

Blaise Computing Inc.

View 232 instantly turns your PC into a full function communications dateline monitor allowing data to be displayed in six different formats, and the system configuration to be completely controlled and saved. Supports all languages.

List: \$219 Ours: \$175 FAXcetera #: 1652-0009 Return: F

FILE MANAGEMENT

Btrieve 5.10 for DOS, OS/2, or Windows (Developer's Kits)

Novell, Inc.

Btrieve Developer's Kits are complete toolkits that allow developers to write applications with Btrieve, Novell's key-indexed record manager. Developers can write applications for either the client-server or client-only versions of NetWare Btrieve™ without changing data management code. Supported languages include BASIC, C, Pascal, FORTRAN, Modula-2, COBOL, and Assembler. Also included are development utilities for creating and manipulating Btrieve files. The kit is available for DOS, OS/2, and Windows environments. Third-party development tools for Btrieve applications are now available allowing more flexibility in writing applications for the different client platforms.

List: \$595 Ours: \$399 FAXcetera #: 1728-0001 Return: L

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List: \$295 Ours: \$266
FAXcetera #: 2210-0001 Return: F

c-tree Plus™ File Handler 6.0 FairCom Corporation

Fast and highly portable B+ Tree functions provide multi-key ISAM file management. There are low level functions to create or maintain individual data and index files, and high level functions for indexed or sequential data access. c-tree Plus supports record and key level locking; fixed and variable length records; duplicate and unique key fields; dynamic file space reclamation; resource records; superfiles; batched operations and in conjunction with the FairCom Servers, full transaction processing and ANSI standard SQL.
List: \$595 Ours: \$476
FAXcetera #: 1381-0004 Return: L

Code Base 4.5 Sequiter Software Inc.

A Database and Screen Management C library for programmers who need speed, portability, productivity and dBASE/Clipper file compatibility. Use the multi-user Database management routines to access dBASE data files five times faster than dBASE IV and process data one hundred times faster. Maintain several index files per database, set relations and filters, and access dBASE III or dBASE IV memo files. Use the Screen Management routines to build pulldown menus, pop-up windows and data entry from pick lists. Develop under DOS, OS/2 or MS Windows. Source code included. Supports Borland Turbo C, Turbo C++, Microsoft C/QuickC, WATCOM C 386 and Zortech C++. Supports MS-DOS or OS/2. Hard disk recommended.
List: \$395 Ours: \$295
FAXcetera #: 1935-0001 Return: F

Code Base 4.5 Portability Release Sequiter Software Inc.

A superset of Code Base 4.5, that provides complete database management capabilities to C programmers. It contains porting information, and two sets of C source code. There is one set of source code for ANSI C and C++ compilers and another set for K&R C compilers.
List: \$495 Ours: \$449
FAXcetera #: 1935-0001 Return: F

Essential B-Tree 2.0

South Mountain Software, Inc.
Provides a complete set of small, fast, powerful and extremely easy to use functions for database manipulation. It is written entirely in C and can be compiled with just about any C compiler. Support for single or multiple keys, fixed or variable length records, automatic file and record locking, floating point keys, re-use of deleted records, and more. Includes the option to combine the data and index files or keep them in separate files. Utilities are provided to convert to/from dBASE III data bases. The library comes with all source code, a comprehensive manual providing detailed examples and demo programs. No royalties.
List: \$199 Ours: \$179
FAXcetera #: 2089-0001 Return: F

r-Tree® Report Generator 1.3 FairCom Corporation

This professional report generation utility, in full C source code, permits complex relational reports to be produced from c-tree data files. r-tree joins records from multiple data files; computes complex virtual fields; selects logical records which satisfy an arbitrarily complex select expression; monitors any number of nested control break fields; computes any number of report field accumulators; and handles page layout with page headers and footers, control break headers and footers and pagination.
List: \$295 Ours: \$236
FAXcetera #: 1381-0003 Return: F

The FairCom® Server 1.0 FairCom Corporation

Affordable, ultra high performance, multi-threaded, transaction processing server designed with developers in mind. Use the Server independently or link it directly into your application. Features include industrial quality transaction processing, including full commit and rollback, intermediate save points and complete logging; fully automatic log management, restart and disaster recover; dynamic on-line data dump and backup; user passwords, access security and on-line administration; deadlock detection and resolution; and read or write locks at the record and individual key level. c-tree Plus™ provides the full client side interface and development kit for this unique server.
List: \$49-\$995 Ours: CALL
FAXcetera #: 1381-0001 Return: L

The FairCom SQL Server 1.0 FairCom Corporation

A complete ANSI X3.135 1986 level 2 SQL engine coupled with all the functionality and features found in the standard FairCom Server including industrial strength transaction processing, high performance multi-thread design, and the unique ability to link the SQL Server directly into your application. Virtually the complete SQL system functionality is available through both the interpreter and the programmatic interface. c-tree Plus™ provides the full client side interface and development kit for this unique SQL Server.
List: \$79-\$1495 Ours: CALL
FAXcetera #: 1381-0002 Return: L

FirstSQL C 2.1 FFE Software, Inc.

An embedded precompiler for PCs which promotes direct access to database and dBASE files from C programs. From within C, users can manipulate a database and dBASE files with SQL statements. Full-fledged database applications can be created using the FirstSQL pre-compiler and other compiler and development tools. High level SQL commands for database access are placed directly in the program source. Acts as a fully relational DBMS. Oracle and DB2 compatible Dynamic Embedded SQL-full precompiler facility to build and execute SQL commands at runtime. FirstSQL CAPI-call level interface to the SQL engine-pass SQL commands as Strings to the DBMS. DLL for MS/Windows-the SQL engine in DLL form for running embedded SQL programs and programs using the First SQL C call level interface under Windows.
with Windows and dynamic SQL:
List: \$395 Ours: \$349
without Windows:
List: \$295 Ours: \$266
FAXcetera #: 1001-1701 Return: L

SoftC Database Library 3.0 SoftC, Ltd.

C library with over 200 functions providing fast access to xBASE files. Library features include: standalone, multi-user and network access; index expression evaluation; automatic record and file locking; built-in disk caching; and find using full or partial keys. Routines are supplied to access the following file types: DBF, DBT, FPT, IDX, MDX, NDX & NTX. Includes complete fully-commented, ANSI & K&R C compliant source code, a Windows DLL, and libs for DOS. UNIX & OS/2 support included in source.
List: \$195 Ours: \$176
FAXcetera #: 1004-9801 Return: F

The Toolbox 2.0

FairCom Corporation
Industrial strength tools to develop applications with both the development ease and speed of a 4GL and the execution speed and efficiency of C. The Toolbox with its development environment by d-tree™, data management by c-tree Plus® and report generation by r-tree® puts performance, productivity, and profitability into one integrated package. Features include prototype generation, data dictionary, dynamic resource swapping, screen management, overlapped windows, file restructuring, runtime portability, menu management, variable length record support, index key compression, dynamic file space reclamation, variable length key fields, high speed B+ trees, complex multi-line reports, multi-file report access, and complete report layout control.
Special List: \$795 Ours: \$569
Professional List: \$1295 Ours: \$1065
FAXcetera #: 1381-0005 Return: F

XQL 2.11

Novell, Inc.

The developer's toolkit for NetWare SQL, Novell's high-performance relational database engine. It permits developers to write SQL applications in C, BASIC, COBOL, and PASCAL, and includes an embedded SQL preprocessor for C. Like all of Novell's database products, XQL utilizes Btrieve for fast and reliable record management so applications created with XQL can share data with Btrieve, NetWare SQL, and Xtrieve PLUS.
List: \$795 Ours: \$636
FAXcetera #: 1728-0003 Return: L

Xtrieve PLUS™ v4.1

Novell, Inc.

Novell's menu-driven relational data access system with a flexible report writer. Xtrieve PLUS™ allows users to define and modify databases created with Btrieve, and with NetWare SQL, Novell's relational database engine. Xtrieve PLUS can access popular front-end applications that are compatible with Btrieve and NetWare SQL including PC accounting packages, spreadsheets, and project management systems. It can be used to create custom displays and reports without programming, or to write Command File macros that can be executed instantly. Features include data editing and sorting capabilities, mouse support, expanded printer support, enhanced configuration and data storage options and security control. Xtrieve Plus is available for the DOS and OS/2 environments, and can be configured to operate with NetWare Btrieve™, the DOS or OS/2 client-only version of Btrieve, or with any version of NetWare SQL.
List: \$995 Ours: \$796
FAXcetera #: 1728-0004 Return: L

SoftC Database Library

SoftC is the database library of choice for professional C & C++ developers. It offers unsurpassed speed, flexibility and portability along with access to industry standard files at a very competitive price.

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GENERAL LIBRARIES

C TOOLS PLUS 6.0

Blaise Computing Inc.

C TOOLS PLUS is designed especially for Microsoft C and provides capabilities to create applications including virtual stackable menus and windows with optional borders and drop shadows and full mouse support integrated within the windowing and menu systems. Routines for building ISRs and TSRs are also provided. Supports Microsoft C 5.0 and later (including MSC 7.0) and QuickC and requires DOS 2.1 or later.

List: \$169 Ours: \$135
FAXcetera #: 1652-0001 Return: F

C Utility Library 5.0

South Mountain Software, Inc.

The C Utility Library is a comprehensive, easy-to-use library of over 400 C language functions for both the experienced and novice C programmer. Includes pulldown and pop-up menus, windowing, list and file boxes; all complete with shadows. Other features include: EMS 4.0 support, the quickest video output available, a window editor/file browser, and file back-up utilities. With C Utility Library's menuing system, screen painter and code generator, you can easily build user interfaces and data entry forms with complete mouse support and keyboard exits. No royalties. All source included.

List: \$249 Ours: \$224
FAXcetera #: 2089-0011 Return: F

Dolphin C Toolkit 1.40

Dolphin Software

Over 225 functions, emphasizing date, time, string, disk, file, directory and printer functions. Date functions convert between calendar dates and long ints and perform date arithmetic. Timer functions. Disk functions detect presence, type and number of disks and disk drives. Complete DOS print spooler interface. Many diverse string and file functions. Supports Borland/Turbo C/C++ and Microsoft C.

List: \$149 Ours: \$134
FAXcetera #: 3019-0001 Return: L

Greenleaf Financial MathLib™ 1.11

Greenleaf Software, Inc.

This product brings the power of decimal accurate Math to the C language. Exact representation of numbers up to 18 digits, freedom from rounding or truncation (unless you request it), plus complete business and financial applications functions. Financing functions include compound and simple interest, internal rate of return, cash flow analysis, bond calculations, amortization, depreciation, statistics and much more. Online help system and source code included. No royalties.

List: \$395 Ours: \$335
FAXcetera #: 1035-0004 Return: L

Greenleaf Functions™ 4.02

Greenleaf Software, Inc.

A library of over 420 functions that cover many useful tasks that your compiler ignores such as DOS and BIOS interface, string functions, interrupt services, disk access and keyboard functions. Graphics video effects and sound are also contained, along with directory operations, file searchers, and two sets of disk file operations. Professional documentation includes examples of each function that helps get you up and running and keeps you there. Full source included; no royalties.

List: \$229 Ours: \$195
FAXcetera #: 1035-0009 Return: L

Greenleaf SuperFunctions™ 1.10

Greenleaf Software, Inc.

An advanced set of functions for the professional C programmer who wants to utilize the technology of today's hardware & software. Features include: expanded memory support, extended mouse functions, advanced time manipulations, unique data functions, DOS critical error handler, windows, menus, and keyboard functions. Source included, no royalties.

List: \$299 Ours: \$255
FAXcetera #: 1035-0008 Return: L

Hold Everything 1.05

South Mountain Software, Inc.

Allows programmers to swap out currently executing programs and return to DOS with almost all available memory ready to be used. Provides a safe, reliable method of saving active memory to disk or EMS in one function. This allows you to run another program and return back to the calling program, right where it left off. Combined with our /*resident_C*/ software you have the ability to use this power in a TSR program as well. All source code included. No royalties.

List: \$199 Ours: \$179
FAXcetera #: 2089-0003 Return: F

/*resident_C*/ 4.5

South Mountain Software, Inc.

A C library which enables you to make your C code memory resident. It has the ability to keep only 4K of your TSR in memory, storing the rest in XMS, EMS or disk memory. With one function call you can turn your C program into a TSR which can be activated by keystroke or hooked into the PC's timer to allow for background processing (see Essential Communications). Also supports interrupt handlers (ISR's) and shared resident libraries. Includes a super keyboard stuffer, text/graphics screen saver and the ability to communicate between TSRs and/or foreground programs. Combined with our Hold Everything product, you have the power to run .EXE or .COM files from a TSR. Source code included. No royalties.

List: \$249 Ours: \$225
FAXcetera #: 2089-0002 Return: F

TSRific

South Mountain Software, Inc.

TSRific lets you write Terminate-Stay-Resident (TSR) programs that automatically swap DOS memory with another program. TSRific requires a single function call and uses only 14K or less of RAM. Features include swapping to XMS, EMS or disk; Saves/Restore text and graphics screens; user definable Hot-Key. TSRific is easy to use and is compatible with a wide variety of languages. Supports Borland C/C++, Turbo C/C++, Borland Turbo Pascal, Microsoft C/Quick C, Microsoft Quick BASIC, dBASE III and IV, FoxPro and Clipper. No royalties. Requires 14K memory. Hard disk recommended.

List: \$99 Ours: \$89
FAXcetera #: 2089-0018 Return: F

Turbo C TOOLS 6.0

Blaise Computing Inc.

Provides the sophisticated, bullet-proof capabilities needed to write applications, including windowing systems with virtual stackable menus and windows with optional borders and drop shadows; full mouse support integrated within the windowing and menu systems. Routines for building ISRs and TSRs are provided. Supports all versions of the Borland C and C++ DOS-made compilers.

List: \$169 Ours: \$135
FAXcetera #: 1652-0002 Return: F

C-GRAPHICS

Baby Driver II 2.0

Autumn Hill Software

A printer interface library for the C and C++ developer wishing to provide integrated printer support from an application. The Printer Interface Library supports over 300 printers of all kinds, and allows printing of text and graphics on any supported printer. The Printer Interface Library also allows you to control scale, rotation, position, palette and dithering. The Presentation Graphics Option adds a graphics primitive library for producing high-quality graphics images at the maximum resolution of any printer. This option gives you EMS/XMS support, 8-bit color support, HP Soft Font capabilities, and more.

List: \$295 Ours: \$266
FAXcetera #: 2263-0002 Return: F

Essential Graphics GUI 1.5

South Mountain Software, Inc.

Essential Graphics GUI is a C programming tool kit for creating graphical user interfaces. GUI provides a wide variety of predefined high level objects including pop-up and pulldown menus, vertical and horizontal menus, data entry objects, list and prompt boxes, radio buttons, percent bars, boolean objects and more. These objects may be used independently or in combination to build customized objects. Full mouse and keyboard support is built directly into each object. A comprehensive and easy to use manual with demos and plenty of examples is included. Essential Graphics GUI requires Essential Graphics Kernel. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed). No royalties.

List: \$149 Ours: \$135
w/source: List: \$298 Ours: \$268
DOS extender List: \$498 Ours: \$359
FAXcetera #: 2089-0015 Return: O

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BABY DRIVER II

printer interface library

presentation graphics option

Print text and graphics on more than 300 printers, with control of scale, rotation, position, palette, and dithering. Multiple IO methods. Driver editor and other utilities included. Full 30-day money-back guarantee, no royalties.

Adds a complete graphics primitive library to the Baby Driver Kernel. Draw at max printer resolution on any printer, with EMS/XMS support, 8-bit color support, HP Soft Font capability, and lots more. Requires the Baby Driver Kernel.

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Essential Graphics Kernel 4.0

South Mountain Software, Inc.

A fast powerful and easy to use graphics library for C programmers. Includes over 250 functions for dots, lines, arcs, circles; character fonts (bit image and vector); world and viewport coordinates; PCX imaging scaling. Supports CGA, EGA, VGA, 8514, Hercules, VESA and most SuperVGA cards. Hardcopy output to most dot matrix printers, HP Laser Jets, PaintJets and HPGL plotters. Includes a virtual printer driver which utilizes EMS/ RAM/disk support high resolution printouts. Includes comprehensive manual with demos and examples. See Essential Graphics chart for 2D and 3D charting and Essential Graphics GUI for user interfaces. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed). No royalties.

List: \$199 Ours: \$179
w/source List: \$398 Ours: \$358
DOS Extender v. List: \$399 Ours: \$358
w/source List: \$598 Ours: \$419
FAXcetera #: 2089-0016 Return: F

Essential Graphics Chart 4.0

South Mountain Software, Inc.

A complete set of 2D and 3D charting functions. Essential Graphics Chart includes true 3D charting with multi-view and multi-perspective screen output. Support for 3D bar, pie and pyramid charts is provided along with a wide range of 2D charts such as bar, line, pie and scatter. Legends are provided with all charts and may be configured in a variety of ways. Chart gives you complete control over all aspects of your graphs. Titles, labels, colors and other characteristics may be set up manually or displayed using defaults. Multiple graphs may be displayed on screen in separate viewports and our own 2D charts provides a user graph type for customizing your own charts. Essential Graphics Chart requires the Essential Graphics Kernel for its low level drivers. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed.) No royalties.

List: \$199 Ours: \$179
w/source List: \$998 Ours: \$898
DOS Extender v. List: \$399 Ours: \$358
w/source List: CALL Ours: CALL
FAXcetera #: 2089-0017 Return: F

FONT-TOOLS 1.0b

Autumn Hill Software

A solution to the problems of creating, editing and using fonts within a graphics application, FONT-TOOLS includes: a versatile mouse-driven graphics-based font editor; several utilities for resizing and modifying font files, viewing fonts, converting font files and downloading fonts to an HP or compatible laser printer; 100 sample font and icon files; and a complete font function library containing over 40 functions. Uses the GEM font format created by DRI so screen fonts supplied with products such as Ventura and GEM Draw are completely compatible. Up to 10 fonts can be loaded and active at any time, each with its own set of drawing parameters.

List: \$165 Ours: \$149
FAXcetera #: 2263-0001 Return: F

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GraphiC 6.0

Scientific Endeavors Corporation

A set of C-callable routines which can be used to create publication quality scientific and engineering graphics. Output files can be converted to PIC, GEM, PostScript, TIFF, or HPGL formats. Features include routines for creating linear, log, semi-log, contour, polar, 2D and 3D bar, and error function plots, Smith, bar and pie charts, full set of 3D routines, mathematical functions, labeling, 22 high-resolution fonts, full PostScript and most hardware support. Comes with source code.

List: \$465 Ours: \$419
FAXcetera #: 1468-0001 Return: L, N

GFX Fonts & Menus Library

C Source Inc.

C library of screen fonts for use with GFX or other graphics systems. Positions character at any pixel. Writes text with transparent background. Provides functions to format and position text.

List: \$150 Ours: \$135
FAXcetera #: 1012-0001 Return: F

GFX Graphics Library

C Source Inc.

Graphics routines library. Provides set of drawing functions, moveable viewports, C source code, setting of graphics modes, auto-scaling and color control.

List: \$150 Ours: \$135
FAXcetera #: 1012-0002 Return: F

GFX Screen Dump Library

C Source Inc.

Dumps graphics screen to printer. Supports most dot matrix, laser and color printers. Allows user to add new printers by filling in table. Stretches output to adjust for differences between video and printer resolutions.

List: \$100 Ours: \$90
FAXcetera #: 1012-0003 Return: F

ICON-TOOLS 2.1+

Autumn Hill Software

Designed to provide a standalone graphics tool that allows you to create, edit, display and manipulate icons from a graphics application. ICON-TOOLS consists of a complete icon editor, an icon modifier utility and an icon view/print utility, plus a complete function library and a full set of sample icons. Function library includes functions for loading and drawing icons, drawing and processing icon menus and even functions for animation. Mouse support for graphics environments is also included. Over 500 separate icons are provided that can be utilized "as is" or as models for creating custom icon sets.

List: \$165 Ours: \$149
FAXcetera #: 2263-0004 Return: F



Menuet 2.0

Autumn Hill Software

A GUI toolkit which is implemented as a callable function library with over 500 high-level function calls. Features include: horizontal bar and pulldown menus; dialog boxes; icons; buttons; radio buttons; data entry forms; scrollable lists; moveable and resizable windows; and a wide variety of widgets including user-defined widgets. Menuet also features: Interface Design Tool—allows rapid prototyping of windows and forms; full on-line documentation; and complete icon and font editors. Menuet's functions can be accessed directly from your program editor using the UpShot access engine installed as a TSR.

List: \$325 Ours: \$275
FAXcetera #: 2263-0003 Return: F

PiXelPrint 1.2A

Autumn Hill Software

PiXelPrint is a utility for printing a wide range of graphics file formats on any of over 200 printers. PiXelPrint uses Autumn Hill's own Baby Driver technology (see separate description). PiXelPrint is designed for printing bitmapped images. The supported graphics file formats include: ART; IMG; PCX; TIF; and WPG. PiXelPrint provides a built in PCL command interpreter for use on HP and compatible printers and can be used in command line, interactive or batch modes. This allows access to downloaded soft fonts and PCL graphics commands. PiXelPrint will utilize either conventional or EMS memory.

List: \$125 Ours: \$113
FAXcetera #: 2263-0005 Return: F

**FOR FAXcetera®
INSTRUCTIONS
TURN TO PAGE 176.**

SUNSHOW "C" Language IMAGE LIBRARY 1.4

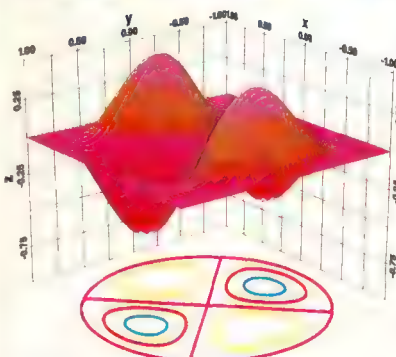
Sun Country Software

A raster-based image toolkit that comes with Microsoft C and Borland Turbo C interfaces, and also special interfaces to Clipper, R:Base, and Sophco's Force. Low level and powerful. Requires an understanding of imaging. Includes over 80 functions: display image, grab screen & grab window, scale, clip, format conversion, flip, rotate, histogram modification, color to mono, merge images with text, push & pop windows, graphic mode text-handling & sunprints as well as SUNGET & SUNSAY functions, draw line, draw ellipse, draw box, drivers for various color/monochrome scanners (Sharp, Howtek, Microtek, etc.) and image capture boards (Targa, Visions, ATronics, ComputerEyes, etc.), as well as a number of other useful functions. It supports industry standard GIF, Targa, PCX, TIF formats. It includes video drivers supporting many SVGA display adapters to 1024 x 768. Includes graphic printer support for Epson dot-matrix compatibles and Hewlett Packard LaserJet II printers, all of which can print to the maximum resolution of the printer. Proprietary color quantizing algorithm from 24-bit downward.

List: \$350 Ours: \$315
FAXcetera #: 2989-0001 Return: N



Graphic Scientific Graphics



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PC Magazine 3/14/89

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- Color separations
- European characters
- Polar contour plots
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- Source code for complete control
- 286 Extender version runs in protected mode. Use with Borland C/C++ 3.1.
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Virt-Win 1.0

TeraTech

Virt-Win gives you virtual windowing and display power! Written in assembly, Virt-Win lets you write complex displays to memory and snap them on in an eye blink. Take partial screen snapshots and cut and paste screen segments. Virt-Win supports Herc, CGA, EGA, VGA, and SVGA. Windowing system allows an unlimited number of overlapping windows that can move, resize, shadow, and explode! Contents may be bigger than physical window and can be panned and zoom at will. No royalties.

List: \$299 Ours: \$269
FAXcetera #: 1972-0015 Return: F

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Victor Image Processing Library 2.2

Catenary Systems

Powerful gray scale and color image processing library. Brightness, contrast, sharpen, outline, resize, rotate, flip, overlay, matrix conv, etc. Color reduction: 24-bit to 8-bit to 256 or fewer colors. Process multiple, single, or partial images of any size, with support for expanded, extended, and conventional memory. Convert 24-bit RGB to SVGA/VGA/EGA images. TIFF/PCX/GIF/TGA bin file formats. Supports EGA/VGA/SVGA up to 1024x768 in 256 colors and 800 x 600 in 32,768 colors. Print any size on laser printer. Scan gray scale images into expanded/extended/conv mem with HP ScanJet scanners. No royalties.

List: \$195 Ours: \$175
w/source: List: \$295 Ours: \$265
w/color reduction source
List: \$495 Ours: \$445
FAXcetera #: 2686-0001 Return: F

LEX/YACC

MKS LEX & YACC 3.1

Mortice Kern Systems

MKS LEX & YACC are compiler construction tools for PC. Together they act as a program generator that takes descriptive input and writes a program module, giving users fast, compact, highly portable code. MKS LEX is a scanner generator which takes a stream of characters as input and outputs a stream of tokens. MKS YACC is a parser generator which can take any language specification as input and create output of straight C, C++, and/or Pascal code which will compile and run with standard C, C++ and Turbo Pascal (4.0 and above) compilers.

List: \$249 Ours: \$205
FAXcetera #: 1634-0002 Return: F

ON PAGES 11 & 12.

PCYACC 3.01

Abraxas Software

PCYACC is a complete language development environment that generates ANSI C source code from input language description grammars for building assemblers, compilers, interpreters, browsers, page description languages, language translators, syntax directed editors, language validators, natural language processors, expert system shells, and query languages.

List: \$495 Ours: \$470
FAXcetera #: 2006-0001 Return: F

LINT UTILITIES

PC-lint (MS-DOS or OS/2) 4.0

Gimpel Software

A diagnostic facility for C that will find bugs, glitches and inconsistencies that your compiler working on one module at a time will miss. Supports full K&R and ANSI C, Microsoft and Turbo keywords, include file directories and indirect files. Use PC-lint to find inconsistent declarations, argument/parameter mismatches, uninitialized variables, unaccessed variables, variables assigned but not used, suspicious macros, indentation irregularities, function inconsistencies, unusual expressions, printf-scanf irregularities and more. Fully customizable: all error messages can be selectively inhibited; size of scalars can be altered (for porting); four memory models are supported; format of error messages can be adjusted; etc. Features automatic generation of declarations (prototypes), wild-card support, auto help, incremental linting using lint object modules, and checks on weak definials. It works with any C compiler or cross-compiler. PC-lint 386, for the power user, has all the features of PC-lint MS-DOS but is bound with a DOS extender to allow you to use all the memory in your machine.

List: \$139 Ours: \$95
386 List: \$239 Ours: \$205
FAXcetera #: 1247-0001 Return: F

MEMORY MANAGEMENT

"C" EMM Library 1.00

SilverWare, Inc.

The "C" EMM Library is a collection of more than 60 functions. Each low-level function provides a consistent, comprehensive "C" interface to the Expanded Memory Manager. The Library also includes high-level functions allowing the programmer easy access for allocating and mapping expanded memory pages.

List: \$199 Ours: \$179
FAXcetera #: 1678-0001 Return: O
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E-MEM

TeraTech

E-MEM gives your program access to more memory. E-MEM transparently allocates, reallocates and frees megabytes of EMS or XMS memory. Support is also provided to access UMBs, the HMA and "raw" extended memory. No royalties. Assembly source code available separately.

List: \$99 Ours: \$90
FAXcetera #: 1972-0012 Return: F



PC-lint 5.0 presents C Bug # 778

```
#define FA 0x1      /* Flag A */
#define FB 0x2      /* Flag B */
#define FC 0x4      /* Flag C */

#define BOTH (FA | FC) /* both flags */

int select(unsigned n)
{
    if( n & (BOTH & FB) ) return 1;
    else return 2;
}
```

There's something blatantly wrong with this function. Can you or your compiler spot it? Call if you need a hint. Refer to Bug #778.

PC-lint will catch this and many other C bugs. Unlike your compiler, PC-lint looks across all modules of your application for bugs and inconsistencies.

New - Optional Strong Type Checking and variables possibly not initialized.

More than **330 error messages**. More than **105 options** for complete customization. Suppress error messages, locally or globally, by symbol name, by message number, by filename, etc. Check for **portability** problems. Alter size of scalars. Adjust format of error messages. Automatically generate ANSI prototypes for your K&R functions.

Attn: Power users with huge programs.

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FlexeLint in obfuscated source form, is available for Unix, OS-9, VAX/VMS, QNX, IBM VM/MVS, etc. Requires only K&R C to compile but supports ANSI. Call for pricing.

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Version 3.1 now available

Interwork is a "C" program library that lets you write your programs as a set of cooperating, concurrent tasks. This greatly simplifies programming for real-time applications, simulations, and other parallel programs. Interwork gives you much more control and efficiency than do heavyweight, multi-tasking operating systems.

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- Unlimited number of tasks with very fast context switching using optional, fully preemptive, time-sliced scheduling. Tasks have full control over preemption and their time-slice sizes.
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- Enhanced facilities for managing task stacks.
- Debugging, tracing and exception handling facilities.
- Expanded user's guide with examples and complete reference manual with on-line documentation. ANSI compliant header files.

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— Glenn Catarious, Quadis, Inc.

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Intel 386	UNIX V.3/386	\$369
DEC VAX, Sun	UNIX BSD, Sun OS	\$369

PC-DOS version is compatible with Borland and Zortech C/C++ compilers (large model) and Microsoft, and Lattice C compilers (large and small models). Please specify hardware and operating system when ordering. Shipping and handling free within continental U.S.; COD orders add \$5; international orders, add \$25; Canada, add \$12. Send check or money order to:



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Far Memory Manager & Debugging Library Dolphin Software

Allows effective and error-free use of all memory in the first 640K. Provides dynamic allocation of blocks and multi-dimensional arrays with reduced risk of heap fragmentation. Does array bounds checking and allows extensive error detection. Represents video memory as a 2D array. Memory operations optionally recorded in a debugging log. Numerous far heap reporting functions. Supports Turbo C/C++ and Microsoft C (5.10/6.00).

List: \$125 Ours: \$99
w/source List: \$175 Ours: \$139
FAXcetera #: 3019-0002 Return: L

MULTITASKING LIBRARIES

Interwork™ Concurrent Programming Toolkit 3.1

Block Island Technologies
Interwork is a C program library which lets you write your programs as a set of cooperating concurrent tasks. Useful for real-time applications, simulation, and parallel programming. Features: unlimited number of tasks, very fast context switching, time-sliced or optional non-preemptive task scheduling, inter-task communication facilities (shared memory, semaphores and more), interrupt and trap handling, and debugging facilities. Extensive user's manual. PC DOS version is compatible with Borland and Zortech C/C++ Compilers (large model) and Microsoft and Lattice Compilers (large and small models).

List: \$269 Ours: \$242
for UNIX: List: \$369 Ours: \$329
FAXcetera #: 2808-0001 Return: L

Tics Realtime Multitasking Kernel 1.03

Tics Realtime
Allows programmer to develop real-time multi-tasking programs that run under MS-DOS or stand alone on an embedded target. Written almost entirely in ANSI C. Requires Turbo C++ 1.0 or higher for MS-DOS operation. Full C source code is available separately allowing Kernel to be easily ported. Feature: pre-emption, non-preemption, and timeslicing in any combination; ROMable; priorities; messages; mailboxes; regions; comprehensive sample application code & more.
List: 299 Ours: \$269
FAXcetera #: 1004-2901 Return: F

TimeSlicer Lifeboat Software

Create real-time, multi-tasking programs at the application level rather than interfacing with the operating system. Install to replace or complement any interrupt service routine (ISR) and the programmer has total control over whether and when the original service routine should execute. Create, suspend, restart or terminate Tasks at runtime. Control the preemption system. The tasks are C functions which, by default, run in a time-sliced, round-robin fashion. Task scheduling allows any task to be scheduled to run immediately rather than having to wait for its turn. Critical resource management functions allow non-reentrant code to be shared by concurrent tasks. Supports Microsoft C 6.0 small and large memory models.

List: \$ 295 Ours: \$266
w/source List: \$1000 Ours: \$899
FAXcetera #: 0233-0002 Return: L

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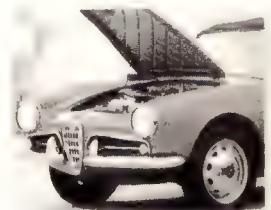
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List: \$199 Ours: \$179
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for C: List: \$329 Ours: \$279
w/source List: \$469 Ours: \$399
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SCREENS/WINDOWS

C-scape with Look and Feel 3.2 Liant Software Corporation

A development tool for creating portable user interfaces for C programs. The C-scape system consists of two pieces that may be used individually or together: Look and Feel Binary and the C-scape library. The Look & Feel Screen Designer is a free-form screen editor for designing and creating screens for C programs. The C-scape library includes functions for data entry and validation, windows, menus, text editing and help screens. C-scape's open architecture lets you create your own new field and validation types. C-scape works in both text and graphic modes. Windows can include bit-mapped or user-supplied images. Other features of C-scape include: built-in error checking, mouse support and support of Hercules, CGA, EGA and VGA (including 43 line mode) monitors.

List: \$499 Ours: \$425
FAXcetera #: 1952-0010 Return: F

C-Worthy User Interface Development System 2.0 Solution Systems

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List: \$449 Ours: \$399
w/source: List: \$649 Ours: \$579
FAXcetera #: 1271-0002 Return: L

Designer QuickWindows 1.5 Software Interphase, Inc.

A companion "CAD" program for QuickWindows Advanced. Hit CNTRL-D from inside the QuickBASIC environment to run Designer. Use the mouse or keyboard to lay out the windows, dialog boxes, and data-entry screens. When you are finished, Designer will write BASIC source code for that screen and merge it into your program.

List: \$69 Ours: \$62
FAXcetera #: 1767-0002 Return: L

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List: \$395 Ours: \$335
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Greenleaf Makeform 2.0 Greenleaf Software, Inc.

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List: \$249 Ours: \$215
FAXcetera #: 1035-0010 Return: F

PANEL Plus II 2.2

Roundhill Computer Systems Ltd.

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Blaise Computing, Inc.

Power Screen is a screen management system designed to make it easy for you to create powerful data entry applications quickly, with virtual screens as large as 255 columns or 255 rows. Supports Turbo C, Turbo C++, Borland C++, Microsoft C 5.0 or later and Turbo Pascal.

List: \$169 Ours: \$135
FAXcetera #: 1652-0006 Return: F

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—Marc Chaikin, Technical Analyst, Developer of "Chaikin Oscillator"

For free Guide to Information & Products and our article "The Practical Development of Neural Network Forecasters..." (Technical Analysis, April 1992) contact:

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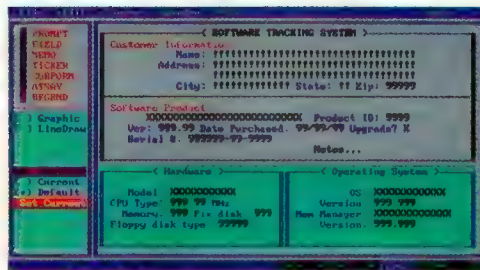
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List: \$149 Ours: \$134
w/source code List: \$349 Ours: \$314
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w/source List: \$890 Ours: \$765
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EXT. DOS List: \$495 Ours: \$399
FAXcetera #: 1437-0001 Return: L

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An interactive screen painter and code generator for use with the Vitamin C function library. Allows you to "draw" your input forms and windows using the interactive WYSIWYG design editor. Objects like input fields, output fields, headers & windows may be created, deleted, repositioned and modified quickly and easily. Configurable templates allow code generation for DOS or OS/2.

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FAXcetera #: 1437-0001 Return: L

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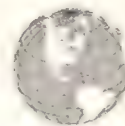
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List: \$395 Ours: \$356
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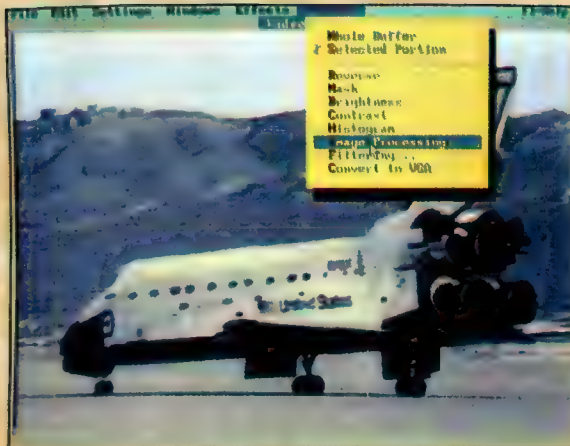
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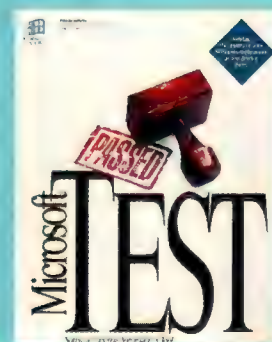
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Draiken Software, Inc.

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List: CALL Ours: CALL
FAXcetera #: 1952-0011 Return: F

Microsoft C/C++ Development System for Windows 7.0

Microsoft Corporation

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Zortech C++ 3.0

Symantec Corporation

Everything needed to develop compatible applications for MS DOS and Windows 3.0, OS/2 and DOS 386 in one box. Includes Windows development tools and MS Windows documentation, allowing developers to create Window applications without purchasing the MS Windows SDK. Introduces the 386 DOS Extender for development of applications up to 4 GB in size, royalty free. New 16-bit DOS Extender to produce multi-megabyte 16-bit applications for 286/386/486 machines. Royalty free. Also includes WINK, the library that converts DOS command line programs to true Windows applications at the flick of a compiler switch. Includes Zortech C++ tools, standard library code and more. List: \$449 Ours: \$337 Comp. upgrade List: \$199 Ours: \$189 FAXcetera #: 1953-0005 Return: N

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Zortech C++ Science & Engineering Edition 3.0

Symantec Corporation

Contains the full MS-DOS, MS Windows 3.0, OS/2, and DOS 386 capabilities of the Developer's Ed., plus additional powerful new features to simplify numerical computing. Zortech compilers are IEEE 748 floating point compliant and support NCEG numerical C extensions group, all fully explained by the extensive Zortech Numerics Guide. Includes the fully documented M++ Library, easy-to-use, complete and standardized multi-dimensional array classes for C++. Royalty free 386 DOS extender addresses up to 4 GB of memory, or the 16-bit DOS Extender for 286 PCs. List: \$995 Ours: \$693 FAXcetera #: 1953-0007 Return: F

GRAPHICS

Flash Graphics

FlashTek, Inc.

Flash Graphics is familiar to many programmers as it has been shipped with the Zortech compiler for several years. However, it now supports Borland, Microsoft, and several other C/C++ compilers. A special module (source code included) acts as an interface between applications written for BGI and Flash Graphics. Supplied are a debug library, which catches many error immediately, and a standard library for maximum speed and minimum code. Super VGA, TIGA, 16- and 32-bit DOS extender support. List: \$175 Ours: \$149 FAXcetera #: 1002-92012 Return: F

CALL TODAY!

Menuet III/C++

Autumn Hill Software

Menuet III/C++ is a complete redesign of the Menuet GUI Toolkit using C++. The C++ version uses aesthetics based upon Motif and is fully CUA compliant. It also features Pen extensions and is compatible with CIC's PenDOS operating environment. The product features a generic graphics API that interfaces with a wide variety of commercially available graphics packages. All standard GUI control constructs are supported, including spin-buttons, combo boxes, and the like. A built-in fonts module provides support for proportional spacing, character rotation, and multiple fonts per window. Many standard font formats are supported. The development system includes an Interface Editor, an Icon Editor, and a Font Editor. The PenDOS Extensions provide a custom control set for the PenDOS operating environment. List: \$375 Ours: CALL FAXcetera #: 2263-0007 Return: F

ObjectGraphics: C++

Symantec Corporation

A high-level, object-oriented graphics library that enhances the capabilities of the ObjectWindows class library. It provides a complete object-oriented solution to graphics programming under Microsoft Windows for Borland C++. ObjectGraphics shields the developer from the Windows GDI by providing in-depth support for graphics such as rectangles, polygons, curves, bitmaps, text with full style and font support, icons and more. ObjectDraw, a sophisticated drawing tool for creating graphics objects for graphical interfaces is included. List: \$195 Ours: \$140 FAXcetera #: 1663-0004 Return: L

RS-232++

NEW!

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- **TEST**—Test Module
- **QUAD**—Numerical Integration Module
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LIBRARIES/UTILITIES

DataTable Spreadsheet Control 1.1 ProtoView Development Co.

NEW! Create sizzling database applications with ProtoView's DataTable. A sophisticated Windows spreadsheet control that will give your application the look and feel of Excel. It makes the perfect interface for any database. With its output picture clause masking, you can edit and format data right in the cell as you type it! /works with any standard dialog editor for interactive setup. Supports all C/C++ Windows compilers and PASCAL.

List: \$249 Ours: \$235
List: \$495 Ours: \$455
FAXcetera #: 2553-0003 Return: O
Full 30 day; sale final if includes source.

DynamicObject C/C++ 1.2 GUI Computer Inc.

DynamicObject C/C++ is a framework that implements a programmable toolbox to make your app resemble an Excel toolbox, Lotus 1-2-3 Palette or Borland Resource Workshop Tools. DynamicObject supports object manipulation on the layout screen including: create objects, size objects and move object; cut, paste, and clear objects under MS Windows. Example of DynamicObject C/C++ defaults with four different objects: rectangle, round-rect, circle and bitmap. Supports C++ compilers from Microsoft, Borland and Zortech.

C++ source List: \$99 Ours: \$90
FAXcetera #: 3107-0004 Return: L

Greenleaf Comm++ 1.0 Greenleaf Software, Inc.

A class library for interrupt driven asynchronous communications. Classes are provided for serial ports, modem controls, file transfers, and check values. There are classes that support the hardware dependent features which are derived from the base class. Service for up to 35 ports at baud rates to 115K baud in DOS. Supports Hayes Smartmodems™, XMODEM, KERMIT, XON/XOFF and VT52 and VT100 (subset) emulation. Support is included for MSDOS, Microsoft Windows, and OS/2 (Windows and OS/2 with the standard drivers).

List: \$199 Ours: \$169
FAXcetera #: 1035-0011 Return: L

Greenleaf Financial MathLib++™ 1.0 Greenleaf Software, Inc.

All the functionality of Financial MathLib™ 1.11 (see separate description) in a true C++ class library, supporting Zortech C++ and Borland Turbo C++. Overloaded math and logical operators provide a natural form of expression, while Decimal, Decimal/Array, Date Degree, Radian and other classes provide hundreds of member functions and operators to speed development of commercial and financial programs.

List: \$199 Ours: \$169
FAXcetera #: 1035-0012 Return: L

ImagingObjects 2.0 Quinn Communications

ImagingObjects is a C++ imaging toolkit enabling you to quickly write applications that enlarge, rotate, reduce, cut, copy, paste, remap, read/save in multiple formats, display, scroll, print, manipulate color, add, subtract, perform bitwise operations, sharpen, smooth, extract edges, (over 100 operations), using compact, medium, large, or huge memory models, and on any sized image. Version 2.0 has improved memory management allowing treatment of 1,2,4, and 8 bit per pixel images without regard to their origin. Version 2.0 also gives you Windows capability.

List: \$349 Ours: \$314
FAXcetera #: 3668-0001 Return: L

Linpack.h++ 1.1 Rogue Wave Software

A complete implementation of Linpack's famous functionality and more in an advanced C++ class interface. LU factorization for all Matrix.h++ types. Cholesky, QR, and Singular Value decompositions. Cholesky and QR least squares classes and Incremental least squares classes (using Cholesky decompositions) allow even over- and under-determined problems to be solved quickly and easily. Tridiagonal and triangular matrix solvers. Condition numbers and determinants fully supported. Built on top of Math.h++'s inlined assembly BLAs makes Linpack.h++ fast. Includes Matrix.h++ and Math.h++

List: \$299 Ours: \$269
FAXcetera #: 2861-0003 Return: L

M++ Array (DOS and OS/2) Dyad Software

An array language extension to C++ designed to simplify array operations and decrease coding time for up to four dimensional arrays. Designed for the programmer not needing the LINPACK and EISPACK numerical functions included in M++ Scientific. Includes common matrix operations, linear equation solutions, and regression solutions, and complete outer operations. All data types from char and unsigned char through complex.

List: \$119 Ours: \$101
FAXcetera #: 2131-0007 Return: L

M++ LSM (DOS and OS/2) Dyad Software

The least Squares Module computes estimates and statistics for linear and non-linear models with vector or matrix weighting and multiple dependent variables. Computed statistics include residuals, predicted values, covariance matrices, and R-squared statistics. Most common non-linear fitting algorithms are provided. (Requires M++ Scientific).

List: \$135 Ours: \$119
FAXcetera #: 2131-0003 Return: L

M++ ODE Module Dyad Software

M++ ODE provides a tool for numerical solutions to Ordinary differential Equations with boundary value constraints for both stiff and non-stiff problems. ODE provides both fixed step methods, which are preferable when the user knows an approximate step length, and adaptive step methods based on local error estimates which keep the solution within a user prescribed tolerance. (Requires M++ Scientific).

List: \$195 Ours: \$175
FAXcetera #: 2131-0009 Return: L

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DOS DEVELOPMENT SOFTWARE

M++ Quad (DOS and OS/2)

Dyad Software

The Quad module provides an interface to one- and two-dimensional numerical integration problems using algorithms based upon the well known QUADPACK package. Allows functional limits in two-dimensional integrals. Gives complete control over the numerous adaptive and non-adaptive quadrature rules. (Requires M++ Scientific).

List: \$195 Ours: \$179
FAXcetera #: 2131-0008 Return: L

M++ Scientific 3.0 (DOS and OS/2)

Dyad Software

Provides all the array handling capabilities of M++ Array plus Spectral functions, and the functionality of LINPACK and EISPACK. Includes QR, LU, DPF, SVD, Cholesky decomposition and eigensystem analysis. Extensive set of methods for all data types including linear equation solutions, matrix factorization and generalized inversions. Symmetric and triangular matrix operations. Complete outer operations. Huge pointers support large arrays for Borland and Microsoft.

List: \$295 Ours: \$265
FAXcetera #: 2131-0001 Return: L

M++ SUM (DOS and OS/2)

Dyad Software

The Statistical Utilities Module contains scalar and array functions needed in statistics. Distribution functions include t, F, Normal, chi-squared, gamma and beta. Methods are provided for computing means, standard deviations, covariance/correlation matrices, and simple random sampling (with and without replacement).

List: \$195 Ours: \$179
FAXcetera #: 2131-0005 Return: L

M++ Test

Dyad Software

Provides methods for testing numeric software using M++ arrays. Includes a complete set of test programs for checking the proper operation of M++. Checksum tests, tests for equality, and assertion tests are provided. Test programs distributed with other M++ modules also require M++ Test. (Requires M++ Scientific).

List: \$249 Ours: \$219
FAXcetera #: 2131-0006 Return: L

Math.h++ 4.1

Rogue Wave Software

Math.h++ combines power and ease of use in a set of C++ classes designed to improve the performance and reliability of your numerics code. Its innovative class structure makes the manipulation of vectors and matrices as easy as built in types like double, yet its inlined assembly BLAs makes your code faster than C or Fortran! Extensive classes for FFTs, linear algebra (via LU factorization), random numbers, statistics, linear regression, vectors and general matrices. Slices and picks fully supported. All objects have full persistence ability. Fully integrated with Tools.h++, providing the complete C++ solution. Extensive documentation.

List: \$ 99 Ours: \$ 75
FAXcetera #: 2861-0001 Return: L

Matrix.h++ 1.1

Rogue Wave Software

Matrix.h++ extends Math.h++ to new matrix types. Banded, Hermitian, Hermitian banded, Tridiagonal, Lower triangular and Upper triangular matrices are all fully supported. Innovative uses of static type checking insure that symmetries in your matrix types are fully maintained without giving up runtime efficiency. Includes Math.h++.

List: \$399 Ours: \$359
FAXcetera #: 2861-0004 Return: L

MouseWrapper.h++

Rogue Wave Software

The partner to View.h++, supplying the Model and View components of a Model-View-Controller architecture. Includes an extensive variety of graphics primitives such as Circles, Polygons, Rectangles, etc. All objects are fully persistent, using Tools.h++'s powerful store/retrieve architecture. Includes Rogue Wave's "Presentation System" for managing object picks, drags, rubber banding, etc.

List: \$495 Ours: \$446
FAXcetera #: 2861-0005 Return: L

POET

BKS Software

POET is the only pure Object Oriented Database management system running on DOS, Windows, UNIX and the NeXT machine starting at \$399. Your object databases have a unique identity that supports the full inheritance and encapsulation of C++. POET applications can handle complex real world models. The database model maps directly to its storage. POET supports schema evolution so extending and maintaining versions of your schema definitions is easy to do. POET's type manager supports all the C++ types as well as date, time and string, or create your own reusable customized types. POET's graphical browser allows you to use and navigate, analyze and modify the structure of your database schemas. Sophisticated indexing and optimized querying can quickly find any instance. Specify compiler and operating system.

DOS: List: \$399 Ours: \$359
Windows: List: \$499 Ours: \$469
FAXcetera #: 1000-6001 Return: L

Spontaneous Assembly for C/C++ 2.1

Base Two Development

This package is the fastest, easiest way to optimize and enhance your C/C++ program in assembly...without coding in assembly. It includes Spontaneous Assembly 2.1 (see separate listing), plus a compact, ready-to-use interface to every applicable function and macro, a 64-bit integer math class, header files, full source code, and over 1,500 pages of documentation packed with examples in C and in-line assembly. Ideal for optimizing "too big" or "too small" programs, or for taking advantage of Spontaneous Assembly's powerful facilities for TSR's, windowing, multi-tasking, environments, data compression, extended-precision integer math, string manipulation, etc. Full source code included. No royalties.

List: \$279 Ours: CALL
FAXcetera #: 2614-0002 Return: F

QualBase 2.0

Qualware

Powerful collection of C++ class libraries—persistence, multitasking, interrupts, arrays, strings, registers, stacks, binary trees, bit vectors, queue, conversions, hash tables, graphs, list classes, and more. Includes QOOPSM, Qualware's extendable persistent store manager, simple array execution for maximum speed, bounded array for quick debugging and linked list modes for prototyping. Features ultra-fine granularity to enable customized classes. QualBase comes with complete documentation and source code.

List: \$190 Ours: \$170
FAXcetera #: 1004-5701 Return: F

Style 1.0

Software Ingenuities, Inc.

Style is a general purpose class library that provides high-level object management for C++. There is no other tool like it. With Style, the implementation of associations and links among objects becomes transparent. By removing many of the trivial details of C++ programming, Style helps you develop your application in a fraction of the time. Powerful traversal functions can navigate through a database of objects and perform operations on these objects. You specify what types of objects to target; the traversal function performs the legwork. Whether your application is simple or complex, Style will save you time.

List: \$250 Ours: \$199
FAXcetera #: 1000-6101 Return: F

FOR RETURN POLICIES
TURN TO PAGE 75.

object-Menu™ for C++



object-Menu Supports
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Borland C++
Microsoft C++ 7.0
MetaWindow • HALO
Genus GX graphics
BGI • MS graphics

object-Menu is a true class library to enable a remarkable GUI environment to be uniquely integrated into your DOS application. Our powerful, compact notation makes this the easiest GUI to develop and maintain. Includes windows, icons, unlimited menu types, scroll bars, spin control, combo boxes, tool bars, data entry, hypertext help system, message system, event manager & more. Comprehensive documentation and 100 examples.

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Introducing: object-Menu Jr.

object-Menu Jr. is the perfect "starter kit" to get acquainted with object oriented GUI programming. object-Menu Jr. includes menus, buttons, popups, dialogs, event management and more. All for just \$129. Competitive upgrade \$99.

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Tools.h++ 4.0

Rogue Wave Software

A set of efficient and versatile C++ foundation classes that will make virtually any programming job easier. Includes a complete set of collection classes, modeled after the Smalltalk-80 environment: Set, Bag, Ordered Collection, Sorted Collection, Dictionary, Stack, Queue and more. Plus, String (with powerful expressive abilities), Date, Time, Regular expressions, Tokenizers classes. B-Tree disk retrieval, files space manager (allocates, de-allocates and coalesces free space). Classes have not been derived from a single object, making it easy to use Tools.h++ with other libraries. Can be compiled as a Windows DLL. All classes support isomorphic persistence, making it possible to restore a complex collection even on a different operating system, or through Windows DDE! All non-Windows classes are strictly portable between DOS and Unix!

List: \$ 99 Ours: \$ 89
w/source: List: \$299 Ours: \$269
FAXcetera #: 2861-0002 Return: L

See page one for special bundle offer with BORLAND C++.

SCREENS/WINDOWS

C++/Views 2.0

Liant Software Corporation

C++/Views is a portable class library for creating high quality platform independent GUI applications for Windows. It comes complete with over 100 GUI and foundation classes for rapid application development. These classes compose a library of parts including windows, views, menus, dialogs, controls, bitmaps, printer, graphics, object classes, and persistent object storage. Also includes C++/Browse, a powerful C++ object class browser as well as source code at no additional charge.

List: \$495 Ours: \$421
FAXcetera #: 1812-0001 Return: F

object-Menu 1.0

ISLAND SYSTEMS

OOP library for quick integration of a C++ GUI. Combine menus, icons, windows, buttons, data entry, dialogue boxes, tear-off menus, scroll bars, etc. Event manager. Window manager. Hypertext help system with librarian. OSF/Motif styling, bevels, shadows, ridges. Powerful, compact notation. 450 page manual plus 100 examples. Supports: (compilers) Borland C++, Microsoft C/C++ 7.0, Metaware C++; (graphics) BGI, Microsoft graphics, Metawindow, Genus GX graphics, Halo graphics.

List: \$369 Ours: \$325
with source: List: \$898 Ours: \$763
FAXcetera #: 2088-0003 Return: L

object-Menu Jr. 1.0

ISLAND SYSTEMS

Creates a graphics user interface environment for DOS applications. Many menu types including horizontal, vertical, pop-up, checked, scrolled, buttons, icons. Dialog boxes, line editor, file chooser, event manager, icon librarian and more. Configurable look and feel. Built-in OSF/Motif and Windows styling. True class library is fully extensible. Powerful compact notation. Great for the C++ beginner. Complete documentation and loads of examples. Supported compilers: Borland C++, Microsoft C/C++ 7.0. Supported Graphics Libs: BGI, Microsoft graphics.

List: \$129 Ours: \$109
FAXcetera #: 2088-0004 Return: F

ProtoView Screen Management Facility 3.3

ProtoView Development Co.

ProtoView is a comprehensive set of design tools, data entry controls and libraries that lets you quickly and easily create a use-friendly interface with data validation for your Windows applications. ProtoView contains 4 components. To begin with, ProtoView has a custom control DLL with built-in data validation, DDE links and message handling. Secondly, ProtoView has a very sophisticated screen painter that can be used not only design your Windows, but to apply data validation, DDE links, and to perform actions on fields and then save them to a standard resource file (which will carry over into ProtoGen's test mode and then into your executable). ProtoView also has a second DLL that contains high level functions for printing files and buffers under Windows, file browsers, editors, and more. The last component of the ProtoView tool kit is a PVDialbox class, so that you can encapsulate the extended functionality of the 2 DLL's within the ObjectWindows library of Microsoft Foundation Classes hierarchy. Supports all C/C++ compilers for Windows.

List: \$395 Ours: \$355
FAXcetera #: 2553-0004 Return: F

QuickWindows Advanced for C/C++ 2.5

Software Interphase, Inc.

QuickWindows Advanced for C/C++ includes all the functions of its BASIC Counterpart. In addition, the library has built-in dynamic memory allocation. QuickWindows Advanced for C/C++ is written entirely in assembly language, uses less than 40K of memory (even for graphics mode pulldown menus with a complex SAA dialog system) and does not require any graphics libraries. Supports Borland Turbo C/C++ and Microsoft C/QuickC. 3.5" diskettes are available to registered users. Limited 30 day guarantee. 3.0 pounds.

List: \$149 Ours: \$134
w/source: List: \$349 Ours: \$314
FAXcetera #: 1767-0006 Return: F

View.h++

Rogue Wave Software

View.h++ is a complete C++ class interface to OSF/Motif, the standard in Unix GUIs. Controller component of a Model-View-Controller architecture, offering 100% Motif functionality - nothing has been left out. Includes an interactive browser that displays and instantiates the View.h++ classes. Extensive documentation includes an exhaustive tutorial on how the browser was written. Includes a copy of Rogue Wave's Tools.h++.

List: \$795 Ours: \$599
FAXcetera #: 2861-0006 Return: L

zApp for DOS and Windows 2.0

Inmark Development Corporation

zApp for DOS consists of a library of over 130 C++ classes that simplify the creation of DOS text mode applications with a Window-like GUI. zApp for DOS provides the event driven model, windows, menus, controls, dialog boxes, mouse support, transparent MDI support, flexible message handling, forms, automatic background tasking, and many other features expected in a modern system, all in DOS text mode. Gives you single source code compatibility with MS Windows, OS/2 PM and UNIX X/MOTIF. Comes bundled with zApp for Windows with source.

List: \$495 Ours: \$446
FAXcetera #: 1000-6401 Return: F

Zinc Interface Library 3.0

Zinc Software Incorporated

Lets you develop powerful object-oriented applications for Windows 3.0, DOS Graphics and DOS Text with one set of source code. Zinc Designer (included) uses platform-independent persistent objects to let you interactively design and save your application screens. Powerful event and window managers seamlessly integrate keyboard and mouse input with one line of code.

List: \$400 Ours: \$360
w/source: List: \$500 Ours: \$450
FAXcetera #: 2807-0001 Return: L

CASE TOOLS

Analysis Manager

Evergreen Case Tools, Inc.

The Analysis Manager is included with EasyCASE Professional and with the EasyCASE Plus Developer's Edition, and is available separately for EasyCASE Plus 3.1. Adds analysis capabilities to the product. Provides for level balancing of pairs of related data flow diagrams (DFDs), including real-time extensions. Checks for the correct carry down of processes, flows, and stores from one level to the next of linked diagrams. Checks for the correct extraction of stored data and the correct usage of terminated and interface flows. Level balancing also verifies that control transforms on real-time DFDs are correctly defined by linked state transition diagrams (STDs) making sure that input and output control flows on the DFD appear as condition and actions on the STD. Also performs checking of all chart types. Prints reports to any supported printer, to a file, or to the screen. In addition, error codes are fed back to the chart using the EasyCASE Plus chart editor.

List: \$195 Ours: \$176
FAXcetera #: 2741-0002 Return: L

EasyCASE Plus 3.1

Evergreen Case Tools, Inc.

EasyCASE Plus 3.1 is an easy-to-use, easy-to-learn, full featured CASE tool. Its IBM SAA/CUA compliant color graphic user interface (GUI) supports a mouse and provides pulldown menus, shortcut keys, dialog boxes, icons and scroll bars. A 'click and drag' approach is used for the selection and manipulation of chart objects. Diagram types available include: Data Flow Diagrams (including real-time extensions), State Transition Diagrams, Structure Charts, Data Model Diagrams, Entity Relationship Diagrams, Entity Life History, and Logical Data Structure. Methodologies supported include: Yourdan/DeMarco, Gane & Sarson, SSADM (3.0 & 4.0), Yourdan/Constantine, Jackson, Ward-Mellor, Hatley, Chen, Bachman and Martin.

List: \$495 Ours: \$445
FAXcetera #: 2741-0001 Return: L

EasyCASE Plus Developer's Edition 3.1

Evergreen Case Tools, Inc.

Includes EasyCASE Plus 3.1 (see separate description), the Analysis Manager (see separate description) and the Schema Generator. The Schema Generator extends EasyCASE Plus to include the capability to automatically generate dBASE III table headers or DDL (Data and the data dictionary). The Schema Generator provides pick lists that provide only allowable data types and constraints for the selected target database. Several SQL options are also supported, including drop database, table and index statements; start database and create index statements; the ability to specify a primary or foreign key, and the ability to force upper and lower case field types, names, and commands. Supported database formats include dBASE II plus and dBASE IV, which can be accessed from dBASE-compatible (xBASE) products, such as Paradox, Clipper, R:BASE, FoxPro, etc.. SQL dialects supported include ANSI, SQL, dBASE IV, SQL Server, SQLBase, ORACLE, Sybase, Ingres, Informix, OS/2 Extended Edition, DB2, and Rdb/VMS.

List: \$795 Ours: \$715
FAXcetera #: 2741-0003 Return: L

EasyCASE Professional Pack 3.1

Evergreen Case Tools, Inc.

Includes both EasyCASE Plus version 3.1 and the Analysis Manager. The integrated Analysis Manager extends the EasyCASE Plus to include Data Flow Diagram level balancing (including real time extensions) and diagram rule checking. Level balancing checks that processes, flows and stores on linked DFDs have been correctly used and carried down from upper to lower levels. Level balancing also balances down from control transforms on real-time DFDs into state transition diagrams. This product also identifies diagram objects used inappropriately (for example, incorrectly connected to other objects on the chart), object usage which violates methodology or chart specific rules, and those not entered correctly in the data dictionary. It also checks for correct definition of composite data structures (records) and elements. Error indications are fed back to the chart to provide visual representation of objects in error.

List: \$649 Ours: \$539
FAXcetera #: 2741-0001 Return: L

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What else would you expect from the leading developer of C++ libraries?...

At Rogue Wave we are committed to allowing our users to tap all of the power that C++ offers. For today's compilers that means templates. **Tools.h++**, our best selling industry standard C++ library, now includes Templates! Whether you use template classes or non-templates classes, **Tools.h++** is the ideal solution!

Tools.h++

Tools.h++ is a complete toolbox of over 97 C++ classes. It is a set of efficient and versatile C++ foundation classes that will make virtually any programming job easier.

- Time and Date handling and manipulation classes.
- String and Character manipulation classes.
- Singly and Doubly linked lists, Stacks, Queues and Vectors classes.
- Smalltalk™-like Collection classes: Set, Bag, SortedCollection, OrderedCollection, Dictionary, Stack Queue, etc.
- Regular Expression Class for search and replace.
- Tokenizer Class for easy string parsing.
- File Class to handle file manipulation with read, write, seek, erase, etc.
- B-tree Class to handle efficient keyed access of disk records.
- File Space Manager Class to allocate, deallocate and coalesce space within files.
- Virtual and Buffered Page Heap to manage objects bigger than 64k.
- Other classes include: Bit vectors, Virtual I/O streams, Cache managers, Error handling and many more!
- All objects fully persistent

Templates!

Rogue Wave's Tools.h++ is an "industrial strength" library that has been used in many commercial applications, small and large. All classes have not been derived from a single root object, so they can be easily integrated with other class libraries. All classes have a Persistent Store facility that allows complex objects to be stored and retrieved on heterogeneous networks or the Windows 3.0's Dynamic Data Exchange or clipboard facility. The classes are bulletproof, optimized for speed, and well tested. Tools.h++ is an excellent example of how to write true C++ code correctly. Source Code is included. All non-Windows classes are strictly portable between DOS and UNIX.

We take advantage of the implementation of templates in Borland® and MetaWare® compilers.

Math.h++

Math.h++ is a complete set of extremely fast C++ classes to handle all of your statistic, linear regression, FFTs, random numbers, vector and matrix needs. Runs on both DOS and UNIX.

Linpack.h++

Linpack.h++ revolutionizes numerics by allowing you to manipulate whole objects rather than low level "do loops", giving you all of the speed of Fortran and none of the headaches. Runs on both DOS and UNIX.

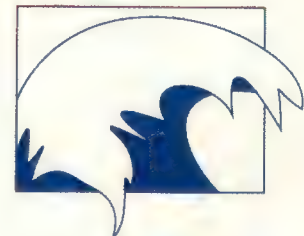
View.h++

View.h++ is a powerful and efficient C++ library that encapsulates 100% of the functionality of the industry standard OSF/Motif. Runs on UNIX.

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DOS DEVELOPMENT SOFTWARE

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Computer Systems Advisers, Inc.
POSE (Picture Oriented Software Engineering), a comprehensive CASE Tool offering complete application development support to the systems analyst developing distributed applications. POSE addresses complete System Development Life Cycle phases including: Planning, Analysis, Design and Implementation. As one of the leading PC based CASE Tools, POSE offers a modular approach to using CASE technology, and contains a graphical user interface consistent across all modules offering greater ease of use and learning. Together, these tools form the basis of a complete systems design workbench, improving the ultimate quality and consistency of information systems through multiple stages of requirements checking and design specification matching for consistency, correctness and completeness of the resulting application.

FAXcetera #: 3577-0001 Return: N

POSE is offered as follows:

I. POSE Complete 10-Module Workstation-

Includes Data and Process Modeling Toolkits, Screen Report Prototyper and Planning Matrix Diagrammer. Provides complete tools to capture, validate and integrate system information requirements. Creates documentation and generates database schema for (select one): DB2, SQL/DS, Oracle, Focus, AS/400 or ADABAS.

List: \$2995 Ours: \$2696

II. POSE Data Model Toolkit-

Provides powerful and complete data modeling including entity relationship analysis, third normal form normalization, transaction analysis and database schema generation for (select one): DB2, SQL/DS, Oracle, Focus AS/400 or ADABAS. Reverse schema engineering feature allows data model generation from existing applications.

List: \$1195 Ours: \$1076

III. POSE Process Model Toolkit-

Supports creation and analysis of dataflow diagrams, structure charts, decomposition and action chart diagrams. Offers full integration with POSE data models.

List: \$1195 Ours: \$1076

FAXcetera #: 3577-0001 Return: L

Schema Generator 3.1

Evergreen Case Tools, Inc.

The Schema Generator is included with the EasyCASE plus Developer's Edition and is available separately for use with EasyCASE Plus and EasyCASE Professional 3.1. It extends EasyCASE Plus to include the capability to automatically generate dBASE III Plus Table headers, or DDL (Data Definition Language) scripts for a wide variety of SQL dialects directly from Entity Relationship Diagrams (ERDs) and the data dictionary. The Schema Generator provides pick lists that provide only allowable data types and constraints for the selected target database. Several SQL options are also supported, including drop database, table and index statements; start database and create index statements; the ability to specify a primary or foreign key; and the ability to force upper or lower case field types, names, and commands.

List: \$195 Ours: \$176

FAXcetera #: 2741-0005 Return: L

COBOL LANGUAGE

COMPILERS

Micro Focus Professional COBOL

Micro Focus

Designed to aid building industrial strength applications on a PC platform. Includes COBOL compiler, the animator source code debugger, an integrated development environment, a screen printer, a COBOL tailored program and text editor, an extended memory manager, an advanced Run Time environment and an on-line help and reference facility. Also included are standalone and network file handlers, embedded SQL support, Microsoft Windows and OS/2 Presentation manager interfaces, a set of portable graphical user interface (GUI) programming routines, a directory list and search facility, a series of application packaging aids, a report design and generation utility and a cross-language reference tool. Professional COBOL runs under either DOS, Microsoft Windows or OS/2 and can make full use of the OS/2 High Performance File System. The compiler supports the ANSI '74, ANSI '85, RM COBOL, DG COBOL, IBM OS/VS COBOL, IBM DOS/VS COBOL, and IBM VS COBOL II dialects and conforms to IBM SAA standards.

List: \$1250 Ours: \$1125

FAXcetera #: 1718-0001 Return: L

Micro Focus Personal COBOL 1.1

Micro Focus

Micro Focus Personal COBOL is a fully integrated program development system for IBM PC's and compatibles. Included are a full-screen text editor, a source code generator for screens and forms, a syntax checker, automatic file handling and an interactive source-code-level debugging and maintenance facility. Personal COBOL is an ideal package for the student learning COBOL programming.

List: \$149 Ours: \$134

FAXcetera #: 1718-0002 Return: L

Microsoft COBOL Professional Development System 4.5

Microsoft Corporation

Provides the most productive development environment ever offered to COBOL programmers. Now includes the Programmer's WorkBench (PWB) integrated development environment, bringing together all the tools needed to edit, build, compile, debug, and browse DOS and OS/2 applications. Integrated utilities speed up the development process by using pulldown menus and dialog boxes to set compiler options, and a complete on-line help system offers information about the COBOL languages, the development systems and all error messages. Both CodeView and the ANIMATOR debuggers are offered, and the new Source Browser provides a virtual road map to your program. The compiler has been improved with a new runtime systems extension that allows complete SQL and Presentation Manager programming in COBOL. In one complete development system, Microsoft COBOL supplies programmers with all the tools needed for business applications development.

List: \$1250 Ours: \$881

FAXcetera #: 1269-0013 Return: L

Realia COBOL 4.00

Realia, Inc.

Compiles, tests, executes IBM VS COBOL and VS COBOL II programs, without change, under OS/2 or DOS (including Presentation Manager) in up to 16MB RAM. Supports: IBM VS COBOL II, OS/VS COBOL, ANS or SAA COBOL; ANSI-85 or ANSI-74; SCREEN SECTION, EBCDIC, transactional file locking; networks; C, Pascal assembler subroutines. Includes interactive source-level debugger, linker.

List: \$995 Ours: \$896

FAXcetera #: 1483-0004 Return: L

RM/COBOL Developer Pack 5.2

Liant Software Corporation

Includes the RM/COBOL-85 Development System in addition to RM/CO*, an integrated application development environment that automates the edit/compile/debug development cycle. RM/COBOL is a modern COBOL compiler/runtime system conforming to both ANSI COBOL 1974 and 1985 standards. RM/CO* creates a menu-driven, windowed environment that keeps the operating system in the background to allow the programmer to remain focused on the application itself. RM/COBOL has object, data file, and source portability.

List: CALL Ours: CALL

FAXcetera #: 1952-0015 Return: F

RM/COBOL Developer Pack + 5.2

Liant Software Corporation

Provides a complete set of development tools to COBOL programmers with the addition of RM/Companion and RM/Panels to the RM/Developer Pack. RM/Companion is a report writer which allows total access to COBOL data files and offers the option of generating reports in either compiled or interpretive mode. RM/Panels is a screen management and forms designer system for developing user interfaces. RM/Panels expedites rapid prototyping of screens and applications and reduces coding to support other applications.

List: CALL Ours: CALL

FAXcetera #: 1952-0019 Return: F



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turn to page 75.**

DATABASE

CLIPPER LIBRARIES

CALC (DB) 1.1

Pinnacle Publishing, Inc.

Extends Clipper 5.0 dialect to include spreadsheet and calculation capabilities.

List: \$299 Ours: \$269
FAXcetera #: 1794-0019 Return: O
Full 60 day guarantee.

Casual.lib 1.0

Extrasensory Software

Send faxes from within Clipper programs to any number of phone numbers at any desired time. Track when sent and phone time used. User works on while processing is done in background. Set page size, font size and resolution for each fax. User needs fax card supporting DCA/Intel CAS interface, like Intel Satisfax.

List: \$100 Ours: \$90
FAXcetera #: 1000-5602 Return: F

ClipWord/SpellClip 2.0

Action Plus Software

The purpose of this program is to provide Clipper programmers with an easy-to-integrate, powerful word processor for their Clipper applications. ClipWord/SpellClip contains functions to Add, Edit, Print, Import, Export, and Save documents. Within these documents **BOLD**, **UNDERLINE**, Spell Checking, Block operations, Field Merging, and Margin settings are supported. Spell Checking is also provided through the SpellClip procedure.

List: \$200 Ours: \$180
FAXcetera #: 3254-0001 Return: N

Dynamic Data Dictionary for CA-Clipper

Market Service Associates

The Dynamic Data Dictionary module provides an API to the Lamaura Data Dictionary for Clipper 5.01 developers. Virtual fields, index definitions and orders, relations, validation and picture clauses and other standard definitions stored in the Lamaura Data Dictionary may be accessed by any Clipper 5.01 application which links in the Dynamic Data Dictionary. Supplied as a library and .CH files, this module and the Lamaura Data Dictionary provide a means of ensuring adherence to individual or corporate database standards. A second major feature is a complete network-independent transaction processing system for Clipper 5.01. Full transaction processing, journaling and rollback features are included in the form of commands and functions which are used within your application. Whether you are developing a standalone machine or on any network, you can provide powerful, secure TP features.

single-user List: \$100 Ours: \$ 90
five-user List: \$125 Ours: \$113
FAXcetera #: 3254-0001 Return: N

ESCAPE 2.05

Pinnacle Publishing, Inc.

Laser printer library for Clipper Developers. Allows users to control HP lasers from within application written in Clipper. Supports soft and cartridge fonts.

List: \$149 Ours: \$135
FAXcetera #: 1794-0020 Return: O
Full 60 day guarantee.

FUNcky II DLESKO, Inc.

FUNcky II is an enhancement library for Clipper and C compilers including but not limited to Microsoft, Turbo C, Turbo C++, Borland C, Watcom and Zortech. Written in C and assembler, it continues to evolve into a language independent library. FUNcky is a 'core' library to which surface libraries are added. It has over 1000 functions, documentation with interactive example programs which can be compiled and 5+ megabytes of Norton Guides. (It contains a limited version of Expert Help). It is compatible with Clipper version from summer '87 on. This library allows you to create your own library.

List: \$495 Ours: \$445
FAXcetera #: 2160-0001 Return: L

GetIt 5.2

Pinnacle Publishing, Inc.

GetIt is an events library and Get system enhancer for Clipper summer 87/5.01. Clipper's only built in event trapping function is SET KEY. GetIt's asynchronous event trapping functions let you call user-defined procedures based on: time interval, keyboard inactivity, COM activity, mouse clicks, etc. Events can be nested, giving your programs complete modularity and event "scoping".

List: \$149 Ours: \$134
FAXcetera #: 1726-0003 Return: O
Full 60 day guarantee.

Nantucket Tools II Nantucket

A comprehensive extension Library for Clipper 5.0. Configured and Optimized to support Professional developers, Nantucket Tools II opens to Clipper programmers a new domain of development solutions that previously required C and Assembler expertise. Already the most productive PC development system, Clipper 5.0 is rendered even more efficient and effective when used with Nantucket Tools II.

List: \$695 Ours: \$499
FAXcetera #: 5400-0002 Return: F

NetLib 5.2

Pinnacle Publishing, Inc.

A complete networking function library. It allows the Clipper programmer to do the common networking tasks facing every programmer in a multi-user environment. These functions include bindery access, directory rights information, user id, reading and setting drive mapping, semaphore locks, who-locked-this-record, login/logout, its, and print capturing. There is support for Novell networks, Banyan Vines networks, and Netbios networks (some of the functions listed above are network specific). This library also provides functions useful in non-networked environments, like scatter/gather, transparent dbf encryption, and access to read-only files.

List: \$299 Ours: \$269
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1726-0004 Return: O
Full 60 day guarantee.

PostScript Library for Clipper, The Version 1.8

Extrasensory Software

Allows you to easily print to a PostScript printer from within your Clipper applications. Print in any font, any size, any color, any orientation, anywhere. Create US Postal and 3-of-9 bar codes. Graphics: boxes, pie charts, circles and free-form shapes (bordered and/or filled with gray, stripes or grids); line, scatter, bar and polar graphs.

List: \$149 Ours: \$129
FAXcetera #: 1000-5603 Return: F

PS ERROR 1.2

Pinnacle Publishing, Inc.

PS ERROR is the only Error System available for Clipper that is able to record both Runtime and Fatal Errors to an Error Log file when they occur. Includes a user-friendly Runtime Error Handler with Source Code so you can customize it as needed. The Fatal Error Handler can be customized through Clipper function calls. PS ERROR also includes functions that provide you with the information about computer hardware (CPU, memory, video, file handles, etc.) and functions to monitor the Stack. Advance support for Local Error Handlers and Special Error Blocks.

List: \$149 Ours: \$150
FAXcetera #: 1794-0022 Return: O
Full 60 day guarantee.

SEZ YOU 1.0

Pinnacle Publishing, Inc.

SEZ YOU includes all the functionality of SEZ YOU, with the additional ability to store the SET CLIPPER= settings in text files, called Configuration Files, which can be edited by the end user. Network users will find SEZ YOU especially valuable because it can store different settings for every workstation on the network, then detect which station is running and use the proper settings. This way you can optimize the VMM system for each workstation (some may have local hard drives, EMS memory, RAM disk, etc.).

List: \$149 Ours: \$134
FAXcetera #: 1794-0026 Return: O
Full 60 day guarantee.

SOS Help! 1.25 for CA-Clipper

Market Service Associates

Using just one line of code, SOS Help! provides a quick and easy means of adding context sensitive help to an application. By linking in a library containing the Help Design System to any Summer '87 or Clipper 5.01 application, a developer or person doing the system documentation can pop up a screen using the F1 key in order to create a help object. Text is typed in as the end user will see it and screen attributes for the help window and shadow are completely customizable. Default help text and a default help object style may be defined for the entire system. When complete, a single binary file containing all help information may be generated. Alternatively, source code may be generated if the number of help screens is small. The application is then re-linked with a smaller version of the library. SOS Help! provides functions which allow context sensitive help for such tough situations as ACHOICE(), DBETIT(), and TBROWSE() (complete working examples provided).

List: \$125 Ours: \$113
FAXcetera #: 2697-0002 Return: L



Database Developers Tools

from

Lamaura Development Limited

SOS Help! for Clipper

Context sensitive help systems without coding.

Lamaura Data Dictionary

For dBASE, FoxBASE +, FoxPro and Clipper. Design, document, maintain databases. Includes workgroup features and security levels.

Dynamic Data Dictionary Module

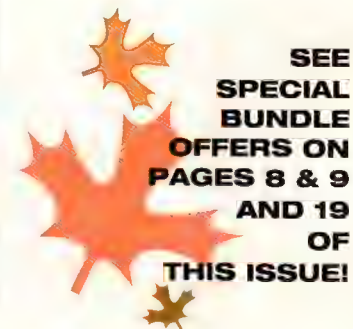
For Clipper 5.x. Provides applications direct access to information in dictionary. Includes complete network independent transaction processing.

Lamaura Development Limited

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**SEE
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AND 19
OF
THIS ISSUE!**

Over **300** Powerful Functions **Clipper v5.01**

Vern Six's Clipper Toolbox contains the functions necessary to build professional looking applications in a fraction of the time it currently takes. Vern Six's Clipper Toolbox makes your applications much more powerful and appealing. Clipper experts and beginners alike will be able to integrate the functions in this toolbox into their applications within minutes of opening the package!

Vern Six's Clipper Toolbox is written entirely in Clipper v5.01 and is not merely 5.01 compatible, it has been written specifically for Clipper v5.01! This means this toolbox is extremely proficient and takes full advantage of new features found only in Clipper v5.01! You won't be dragging around all the baggage from Summer '87 libraries that merely "work" with Clipper v5.01.

Complete source code is included **FREE** of any additional charge. The source code can be easily be modified by you to suit your specific needs and it serves as a wonderful tutorial for someone wanting to learn clipper v5.01.

**VERN SIX'S
Clipper Toolbox provides...
Elegantly written functions
dealing with the 7 basic
areas of most applications!**

- ◆ The Art of User Interface—windows, menus, validation routines, alert boxes, interactive queries, index progress functions and much more.
- ◆ Complete context sensitive help—can be added to ANY application with one function call! Help screens can be created/edited without the need to recompile or link your application.
- ◆ Improved date/time functions—numerous extensions to the Clipper date/time functions.
- ◆ Database/Networking functions—complete record/file locking, network semaphores, database browsing and maintenance functions, and much more.
- ◆ Complete Data Dictionary—ensure database/index integrity, produce *.CH files so when your data dictionary changes so will your *.PRG files!
- ◆ Printer Control—currently over 200 printers are supported and your user's can add printers "on-the-fly".
- ◆ Security/Data Encryption—force user's to "login" to your applications, encrypt data to protect it from unauthorized curious eyes!

Vern Six's Screen Designer/Translator

Vern Six's Screen Designer/Translator (the Designer) will save you hours of time consuming design and coding by allowing you to design your user input/update screens in a very easy point-and-shoot interface. The designer provides the unique capability for your screens to be 100% language independent (translatable). It has the ability to display your screens in different languages all from the same code!

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Clipboard is a self-contained, fully functional, stand-alone electronic mail and bulletin board system. Clipboard requires only MS/PC-DOS v3.3 or higher and ANSI.SYS to operate and is designed to operate on a stand-alone computer. Also works with a wide variety of NetBIOS compatible Local area networks and can support an unlimited numbers of local and/or remote users. Clipboards Electronic Mail capabilities are numerous. Separate, secure message areas can be established to allow for electronic communications among and between various corporate departments.

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***FrontLine*
SOFTWARE**

Vern Six's Clipper ToolBox 9.0 FrontLine Software

Vern Six's Clipper ToolBox is an easy to use set of functions for building professional applications in rapid turn around time. It is written in Clipper 5.01. Tools in the box allow you to build: user interface, context sensitive help, improved date/time dictionary, printer control, security/data encryption. Complete source code is included at no additional cost. The ToolBox provides over two hundred functions, which are critical to application development.

List: \$140 Ours: \$95
FAXcetera #: 1004-7603 Return: N

Visual Interface 1.1 Pinnacle Publishing, Inc.

The new class library that lets you design graphical user interfaces with movable windows and mouse driven menus in Clipper. Visual Interface gives you all the classic elements of graphical user interfaces.

List: \$299 Ours: \$269
FAXcetera #: 1794-0023 Return: O
Full 60 day guarantee.

ZipCode/Clip 2.0 Action Plus Software

ZipCode/Clip includes: database containing over 75,000 zip codes, with cities, states and counties. Database can be accessed from dBASE III+, dBASE IV, Clipper, FoxBase, FoxPro or other XBase applications. Clipper source code to perform Look-Ups from within your Clipper Applications (Summer '87 & 5.0) Zip Code database updates available regularly.

List: \$100 Ours: \$90
FAXcetera #: 3254-0002 Return: N

COMMUNICATIONS LIBRARIES

CommTools 1.0 Pinnacle Publishing, Inc.

Telecommunications programming library for dBASE, Clipper, FoxBase, FoxPro and QuickSilver. Supports file transfer protocols, terminal emulation and fax boards. Allows user to communicate with other systems in both terminal emulation mode and file transfer modes. Gives user broadest set of communications standard options available to dBASE programmers.

List: \$299 Ours: \$269
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0026 Return: O
Full 60 day guarantee.

SilverClip SPCS Silverware

SilverClip SPCS brings reliable high-performance interrupt-driven control of asynchronous communications to Clipper applications. SilverClip SPCS comes with complete source code, making customization fast and easy. It allows simultaneous access to an unlimited number of Comm ports. Fully interrupt-driven to insure reliable data transfers. Incorporates a table-driven design for maximum flexibility. Supports a variety of async devices at up to 115K baud rate.

List: \$299 Ours: \$239
FAXcetera #: 1678-0006 Return: O
Unconditional money-back guarantee.

SilverClip Library SPCS SilverWare

Fully interrupt driven asynchronous communications for Clipper 5.0. Allows simultaneous access to an unlimited number of Comm ports. Baud rates to 115K, Background Timers, Terminal Emulation: ANSI, TTY, VT 100, VT 52. File Transfers: XMODEM, YMODEM (Batch), 1K-XMODEM-G, YMODEM-G (Batch) and ASCII. Interrupt 14 redirection for LANs, Flow control, Smartmodem support, high-level remote input. Includes complete source code. Royalty free.

List: \$299 Ours: \$259
FAXcetera #: 1678-0001 Return: L

Telepathy 1.11 Extrasensory Software

The finest serial communications library for Clipper. Supports Kermit; X, Y, Y-G and ZMODEM; & ASCII. Background communication, easy status display updates, direct use of serial devices like bar code wands. UDFs hook directly into file transfer protocols and terminal emulators (which include TTY, PC ANSI, VT102). Supports multiple port cards, comes with unmatched scripting primitives.

List: \$220 Ours: \$199
FAXcetera #: 1000-5601 Return: F

DBMS

ARAGO dBase 2.5 WordTech Systems, Inc.

ARAGO dBase is a fully dBASE IV compatible database management system with unmatched performance and ease of use. It is exceedingly fast and features an elegant CUA compliant user interface with extensive HELP facilities, a test coverage analyzer, a panel painter, and numerous other tools for both first-time users and advanced developers. RAGO dBase is also compatible with dBASE III+ which will allow you to get started immediately running millions of existing applications!

List: \$699 Ours: \$595
FAXcetera #: 0539-0001 Return: F, N

ARAGO dBase/LAN 2.5 WordTech Systems, Inc.

ARAGO dBase/LAN offers the simplest solution for shared access to Xbase data. Users can instantly make the transition from single user to multi-user, because locking is automatic and you can read data even if someone else has write-locked it. ARAGO dBase/LAN also incorporates a new kind of optimization which greatly enhances its performance and allows it to run up to five times faster than dBASE IV.

List: \$699 Ours: \$595
FAXcetera #: 0539-0006 Return: F, N

ARAGO Professional 2.5 WordTech Systems, Inc.

ARAGO Professional is the complete dBASE IV compatible development environment. ARAGO Professional is stunningly fast with a CUA interface. It includes both multi-versions of ARAGO dBase and ARAGO Quicksilver. You can easily create dBase programs and also generate .EXE files for unlimited distribution. (Requirements: DOS 3.1 or higher, IBM PC or better, hard disk, 640K RAM).

List: \$1199 Ours: \$945
FAXcetera #: 0539-0005 Return: F, N

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DOS DEVELOPMENT SOFTWARE

Clarion Personal Developer 2.0 Clarion Software

Clarion's Personal Developer allows you to create and run your own customized programs in minutes—even if you have never touched a keyboard before. It gives you relational capabilities, functions, utilities, and a development environment. The programs and data files are upwardly compatible with the Professional Developer. And, it imports/exports dBASE, Lotus 1-2-3 and ASCII files.

List: \$79 Ours: \$69
FAXcetera #: 1862-0001 Return: L

Clarion Professional Developer 2.1 Clarion Software

A fully equipped development system for producing PC applications. Includes an applications generator for creating screens, windows, tables, menus and reports. Key features include: built-in LAN support, links to C and Assembler, and contains .RTLink for generating overlaid .EXE programs to distribute with no royalty or runtime fees. Contains Report Writer, a powerful ad-hoc query utility. Speed, flexibility and ease-of-use, give the power to create much richer programs—in a fraction of the time.

List: \$845 Ours: \$459
FAXcetera #: 1862-0002 Return: L

Clarion Professional Developer 2.1 Competitive Upgrade Clarion Software

Upgrade now from your existing database product to Clarion Professional Developer version 2.1. Proof of ownership required; offer available while supplies last.

List: \$195 Ours: \$185
FAXcetera #: 1862-0002 Return: L

Clarion Software Distribution Kit 2.0 Clarion Software

The Clarion Software Distribution Kit is a development tool that provides a customized installation process for applications that are to be distributed to end users. The kit is designed for use by any developer who distributes software or data, including in-house software teams and independent developers. Developers can create distribution diskettes through user-friendly, menu-driven interface. Any type of file can be compressed and stored on diskettes for distribution.

List: \$199 Ours: \$179
FAXcetera #: 1862-0005 Return: F

DataBoss 3.5

Kedwell Software, Inc.
Relational database application generator. Use to develop complete applications with menus, forms, browse tables, memo fields, reports and more. Includes sophisticated screen painter; field definition template for defining field characteristics, indexes, data files and their relations; WYSIWYG report designer; generator engine and skeletal files. Generates structured "C" or Pascal source code. No license or runtime fees.

List: \$695 Ours: CALL
FAXcetera #: 3758-0001 Return: F



dBASE IV 1.5 Borland International

Provides both first time and advanced users with the tools to develop and implement solutions to a wide range of PC data management needs. The dBASE IV language combines all the commands and functions of dBASE III PLUS, enhanced with over 315 new commands and functions including SQL. Also includes menu-driven Control Center, Design Tools, Automatic Code Generator, interactive windowed debugger, and integrated program editor. Runs on either single or multi-user systems.

List: \$795 Ours: \$589
FAXcetera #: 2660-0001 Return: N

Purchase Que's Using dBASE IV to save time and \$\$! Command chart functions Reference and SQL Coverage!
\$29.95

filePro Plus

The Small Computer Company, Inc.

A Menu driven Application Generator, 4GL and RDBMS. filePro Plus is an "all-in-one" programming environment with all the tools you need for creating high-quality, feature-rich applications. Some of the tools include a CUSTOM Menu Generator, Screen and Report Painter, built-in debugger, event driven processing, browse look-up windows, and the ability to create your own data types. Capabilities include unlimited files per application, 1 billion records per file, ability to import and export ASCII, delimited ASCII, Lotus, and Word Perfect files. With filePro Plus your applications can stand the test of time. You can create new or modify existing applications, as quickly and frequently as your application needs change. All applications created in filePro Plus are completely portable on over 200 hardware platforms, and over 12 operating systems including: MS-DOS, Networks, XENIX, UNIX, AIX, ULTRIX, VMS, and HP-UX. Runtimes available for distribution.

List: \$699 Ours: \$579
Lan 1-5 Users: List: \$1595 Ours: \$1359
FAXcetera #: 2254-0001 Return: F

FoxPro 2.0 Microsoft Corporation

Delivers the next generation in DOS relational database management systems. Intuitive, mouse-driven interface and powerful 4GL tools make data entry, reports, queries, and other tasks fast and easy. Patent-pending Rushmore™ query optimization performs queries faster than DB2 on a mainframe. Industry standard XBASE language allows easy migration of applications, while extensions allow development of object-oriented, event-driven applications.

List: \$795 Ours: \$549
FAXcetera #: 1506-0001 Return: O
60 day unconditional

Purchase Que's Using FoxPro 2 to save time and \$\$! Covers basic features to advanced topics and power use!
\$29.95

FoxPro 2.0 6-Pack Microsoft Corporation

Adds network support to the features of single-user FoxPro 2.0. When installed on a network file server, it may be accessed by up to six workstations simultaneously. Additional workstations require additional 6-Packs. Supports exclusive or shared use of files, file and record level locking, automatic locks, programmable locks and multiple file or record locks per station.

List: \$895 Ours: \$529
FAXcetera #: 1506-0006 Return: O
60 day unconditional

FoxPro 2.0 Library Construction Kit Microsoft Corporation

Allows creation of FoxPro API libraries in C or Assembly code. Includes a specialized version of the Watcom™ C compiler and INCLUDE libraries necessary to interface with FoxPro's internal routines. Libraries created may be used interactively from the FoxPro command window, in applications run under FoxPro, or in distributed runtime or .EXE applications.

List: \$500 Ours: CALL
FAXcetera #: 1506-0005 Return: O
60 day unconditional

Iconic Query 1.0 IntelligenceWare

The easiest to use visual database interface ever. Iconic Query changes the nature of database access by introducing "what-you-see-is-what-you-ask" query approach, allowing a user to point and click at visual scenes instead of using a query language. It makes databases immediately available to everyone—with no prior training. You just click on interesting icons, and get instant answers to queries.

List: \$290 Ours: \$270
FAXcetera #: 1798-0009 Return: N

IXL: The Discovery Machine 3.0 IntelligenceWare

IXL, which stands for Induction on Extremely large Databases, finds previously unknown rules, patterns and correlation in existing databases. The analysis of IXL may be shaped by the user towards a specific task, or IXL may be set to roam freely through the database. The system outputs easy-to-read rules which characterize data, providing insight and understanding. IXL is a combination of a built-in query processing module and database interface, a built-in statistical module for data analysis and a discovery and induction module for rule generation.

List: \$790 Ours: \$709
FAXcetera #: 1798-0013 Return: N

MicroSTEP QS 1.61 SYSCORP International

MicroSTEP QS is a visual programming tool for creating and maintaining database applications. MicroSTEP QS creates high-performance client/server applications without requiring network expertise. Supports Btrieve, dBASE, ASCII and NetWare SQL.

List: \$895 Ours: \$805
FAXcetera #: 1004-7701 Return: F

Paradox 4.0 Borland International

Ask complex, ad hoc data questions with Query-by-Example (QBE). Create multi-table forms and reports, and export/import Borland Quattro Pro spreadsheets. Utilize PAL (Paradox Application Language)—a powerful, full-featured development language for developing mission-critical applications—and VROOMM dynamic memory utilization, all leading to substantial performance gains for Paradox users.

List: \$795 Ours: \$596
FAXcetera #: 1862-0001 Return: F

dBASE COMPILERS

ARAGO Quicksilver 2.5

WordTech Systems, Inc.

Allows you to compile ARAGO dBase or dBASE IV applications into stand alone executable files that do not require distribution royalties. These .EXE files are small, run faster because they are created in machine code, and protect application source code. Applications compiled with ARAGO Quicksilver support multi-user capabilities without modifying source code.

List: \$799 Ours: \$645
FAXcetera #: 0539-0002 Return: F

Clipper 5.01

Computer Associates

Clipper is a comprehensive PC application development system for PCs offering network support, user-extensibility, a replaceable database driver and executable file generation. An open architecture system, Clipper 5.0 includes a robust language, pre-processor, compiler, linker, virtual memory manager, editor and debugger, and permits development of applications that are larger than available memory.

List: \$795 Ours: \$499
FAXcetera #: 5400-0001 Return: L

Quicksilver/SQL 1.3R WordTech Systems, Inc.

Compiles dBASE application programs to run in combination with a SQL-based database server engines. Through the use of invisible SQL and embedded SQL, the developer can seamlessly integrate the dBASE language and SQL. Invisible SQL automatically and transparently maps dBASE commands to a SQL database as needed. Embedded SQL allows SQL queries to be explicitly formulated within a dBASE application to gain maximum efficiency. Since an application can use both invisible SQL and Embedded SQL, developers can maintain their investment in dBASE by making a gradual transition to the use of SQL.

List: \$1495 Ours: CALL
FAXcetera #: 0539-0003 Return: L

WATCOM SQL Developer's Edition - NEW! WATCOM

A complete client/server development tool including a standalone single-user SQL database server. Allows you to develop and deploy single-user standalone applications, and to develop applications for use with the WATCOM SQL Network Server Edition. You get the ACME (Application Creation Made Easy) front-end application development system. ACME combines visual forms design with simple event-driven programming to allow rapid prototyping and development of client applications without C programming. The Developer's Edition also includes IBM SAA standard embedded SQL support for C/C++ application development with WATCOM, Microsoft, and Borland compilers. Components include: single-user standalone database server (both 16- and 32-bit versions); Interactive SQL; ACME front-end application development system; embedded SQL/C preprocessor; SQL libraries for use with WATCOM C, WATCOM C/386, Microsoft C/C++ and Borland C/C++. Comes with both 5.25" and 3.5" diskettes.

Special Introductory Offer!

List: \$795 Ours: CALL
FAXcetera #: 1683-0010 Return: O
Full 60 day guarantee.

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WATCOM SQL

PC-based Client/Server SQL Tools

Four Good Reasons to get your copy right away:

1. True Client/Server for reliability and performance

Your databases are protected from corruption by features such as referential and entity integrity, as well as true transaction processing. Client/server architecture and our 32-bit database server software help deliver increased performance for applications running on your PC LANs.

2. Royalty-free run-time

For just \$99 you get royalty-free run-time support. It lets you distribute applications for standalone PCs and include our single-user run-time database server. It also lets you distribute your applications on an unlimited number of client machines in network environments.

3. Scalability

Whether you implement applications using the ACME front-end or write them in C or C++, they can be designed to run without change in environments ranging from standalone 640K single-user PCs to large networks running our

high-performance multi-user database server.

From entry level PCs... You can use DOS PCs with just 640K memory as database server machines for small networks. For single-user standalone environments, the SQL database server together with an application can run on DOS PCs equipped with a minimum of 640K memory.

...to high end servers. The WATCOM SQL database server automatically adapts to utilize the available memory on your system for increased performance. The 32-bit version unleashes the power of 386/486 PC's to efficiently serve many clients in large networks.

4. For a limited time it's yours for just \$395

WATCOM SQL Developer's Edition has a suggested retail price of \$795 but for a limited time you can get it at the introductory price of only \$395. Even better, as a registered user of the Developer's Edition you'll be able to get a copy of the 6-user Network Server Edition for only \$99 (Suggested retail price: \$795).

Developer's Edition

Complete Client/Server Development Tools Package Including Standalone Single-user SQL Database Engine

The Developer's Edition allows you to develop and deploy single-user standalone applications, and to develop applications for use with the WATCOM SQL Network Server Edition. You get the **ACME (Application Creation Made Easy)** front-end application development system. It combines visual forms design with simple event-driven programming to allow rapid prototyping and development of client applications without C programming. The Developer's Edition also includes IBM SAA standard embedded SQL support for C/C++ application development with WATCOM, Microsoft and Borland compilers.

Package components include: Single-user standalone database server (both 16 and 32-bit versions) • Interactive SQL • ACME front-end application development system • Embedded SQL/C preprocessor • SQL libraries for use with WATCOM C, WATCOM C/386, Microsoft C/C++, and Borland C/C++.

System Requirements:

Hardware: IBM PC compatible with hard disk, 640K minimum memory
Software: DOS, Windows DOS box, or OS/2 DOS box

Special Introductory Offer: \$395 (Suggested retail price: \$795)

Special offers available to registered users: (details inside package)

- Royalty-free run-time support: \$99
- 6-user Network Server Edition: \$99 (Suggested retail price: \$795)

Network Server Edition

High-performance Multi-user SQL Database Server for PC LANs

The Network Server Edition provides client/server support for multiple concurrent users in a local area network environment. The WATCOM SQL database server supports ANSI standard SQL and provides advanced capabilities, including bi-directional scrollable updatable cursors, referential integrity, row-level locking and symmetric multiprocessing of requests. WATCOM SQL also gives you comprehensive security capabilities, data encryption and data compression. Compatible programming interfaces let you implement applications that run without change using either the standalone single-user database or the Network Server Edition.

Package components include: Multi-user network database server (both 16 and 32-bit versions) • Interactive SQL • Network requestor and request manager.

Client System Requirements:

Hardware: IBM PC compatibles, 640K minimum memory

Software: DOS, Windows DOS box, or OS/2 DOS box

Database Server System Requirements:

Hardware: IBM PC compatible with hard disk, 640K minimum memory

Software: DOS

Network Requirements: NetBIOS or Novell Network (IPX)

Suggested Retail Price: 6-user version: \$795
Unlimited version: \$1,595

WATCOM, 415 Phillip Street, Waterloo, Ontario, Canada N2L 3X2
Telephone: (519) 886-3700, Fax: (519) 747-4971

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DOS DEVELOPMENT SOFTWARE

WATCOM SQL Network Server Edition 3.0

WATCOM
The WATCOM SQL Network Server Edition is a high-performance multi-user SQL database server for PC LAN's. The Network Server Edition provides client/server support for multiple concurrent users in a local area network environment. The WATCOM SQL database server supports ANSI standard SQL and provides advanced capabilities, including bi-directional scrollable cursors, referential integrity, row-level locking and symmetric multiprocessing of requests. WATCOM SQL also gives you comprehensive security capabilities, data encryption, and data compression. Compatible programming interfaces let you implement applications that run without change using either the standalone single-user database or the Network Server Addition. Components include: multi-user network database server (both 16 and 32-bit versions); interactive SQL; network requester and request manager. Requires NetBios or Novell Netware (IPX). Comes with both 5.25" and 3.5" diskettes.
6 User Version List: \$795 Ours: \$639
Unlimited List: \$1595 Ours: \$1279
FAXcetera #: 1683-0011 Return: O
Full 60 day guarantee.

dBASE APPLICATION GENERATORS

ERwin/DBF Logic Works

Logic Works ERwin/DBF brings the power of Logic Works ERwin/ERX to dBASE developers. Build a data model and ERwin/DBF will generate a complete dBASE schema. ERwin/DBF will also import dBASE schemas to help you maintain your existing applications. When used in concert with ERwin/SQL or ERwin/ERX, ERwin/DBF can help you migrate your applications between dBASE and other DBMS platforms.
List: \$795 Ours: \$716
FAXcetera #: 2666-0002 Return: N

R&R Report Writer Code Generator 4.0

Concentric Data Systems, Inc.
Designed for developers working with dBASE compatible databases. Translates reports saved with Version 3 or 4 of R&R for dBASE into dBASE programs in just seconds. Generates code compatible with dBASE IV, Clipper Summer '87, Clipper 5.0, FoxBase+, or FoxPro. The resulting code is modular and efficient, and can optionally include comments. It can be modified, compiled, linked, and/or ported to other environments. All features of Version 4 of R&R for dBASE are supported, including proportional fonts and preprocessed totals.
List: \$199 Ours: \$159
FAXcetera #: 1638-0004 Return: F

UI2 Programmer Version 2.1

Template Garden Software
UI2 is a powerful development environment which includes an editor for designing screens and reports, an integrated, easy-to-use data dictionary, and a template driven applications generator. UI2 includes a complete set of templates that generate dBASE III, dBASE IV, Clipper, FoxBase+, FoxPro, QuickSilver, dBase and C programs.
List: \$595 Ours: \$536
FAXcetera #: 0910-0003 Return: F

UI2 Touch and Go 1.0

Template Garden Software
Code generator for developing complete, full-featured, customized applications. Incorporates UI2's screen/report editor and data dictionary, but not the template compiler. Easy upgrade path to UI2 Developers' Release which offers additional templates for component parts of applications as well as an object-oriented template language for modifying or writing templates. Supports dBASE, FoxPro, FoxBase+, Clipper, QuickSilver, dBase.
List: \$395 Ours: \$356
FAXcetera #: 0910-0001 Return: F

Vern Six's Designer/Translator 1.0

FrontLine Software
The designer generates expert Clipper 5.01 code for user interface screens. This eliminates hours of tedious work and time associated with coding user screens. A unique feature of the designer is the capability to change the display to any language for the user (Spanish, French, German), without writing different versions of the application. Complete source code is available at no additional cost. The designer is written to take full advantage of Vern Six's Clipper ToolBox 9.0 (Available separately).
List: \$120 Ours: \$79
FAXcetera #: 1004-7601 Return: N

DOCUMENTATION AIDES

CLEAR for dBASE 2.1

Clear Software
CLEAR helps dBASE language developers understand and document code by automatically drawing program flow charts, multi-level tree charts, and formatted source listings. While processing applications, CLEAR analyzes a program's logic and reports logical inconsistencies & syntactical errors. Supports dBASE II, III, III plus, IV, FoxBase, FoxPro, Clipper, QuickSilver, and dBase.
List: \$199 Ours: \$175
FAXcetera #: 1853-0001 Return: F

Documentor, The 1.51

Template Garden Software
Productivity tool designed for navigating large, complex Xbase systems. Provides full analysis and debugging capabilities, as well as complete technical documentation detailing the mechanics, logic, structures and elements of an application. Creates action diagrams, concordance reports, hierarchy outlines/box diagrams, hierarchy calling tree/system tree, DBF/index reports. Supports dBASE, FoxPro, FoxBase+, Clipper, QuickSilver, dBase.
List: \$295 Ours: \$266
FAXcetera #: 0910-0002 Return: F

Lamaura Data Dictionary

Market Service Associates
The Lamaura Data Dictionary provides a centralized source for information about all your databases. It allows structures and relations to be prototyped and tested before any code is written. It assists in ensuring proper database design, normalization, data and referential integrity and prevents circular references. Complete documentation may be stored. Tables may contain virtual fields. Reports contain all data about fields, tables, relations, indexes, etc., as well as associated documentation. The universal dictionary allows access to any fields. The Supervisor function of the data dictionary

allow configuration and maintenance. Multi-user versions include three security level. Supports dBASE II Plus, dBASE IV, FoxBase, FoxPro, Clipper and Arago. Supports all .DBF files, multiple index files, (.MDX, .CDX) and .NTX, .NDX, and .IDX index files. When used in combination with the Dynamic Data Dictionary, Clipper 5.01 applications follow definition (including validation and picture clauses) stored in the Lamaura Data Dictionary and have access to full network independent transaction processing capabilities. See Dynamic Data Dictionary for further information.
single user List: \$395 Ours: \$335
five-user List: \$995 Ours: \$845
FAXcetera #: 2697-0001 Return: L

GRAPHICS

ColrTrax 1.0

Blackhawk Data Corporation
A presentation-quality color screen-print routine for the HP PaintJet, PaintJet XL, PaintJet XL300, and the HP DeskJet 500C. Any screen can be accurately printed from 40x25 text mode up to 1024x768x256 color graphics modes. Blazingly fast, ColrTrax produces high quality output with a sophisticated bi-directional error-diffusion filtering technique. ColrTrax lets the user adjust hue weights (red, green, and blue), contrast, color saturation, brightness and size of output images.
List: \$149 Ours: \$134
FAXcetera #: 3051-0003 Return: L

dGE 4.2

Pinnacle Publishing, Inc.
Database graphics package. Graphing functions include pie, high-low-close, polar, time series, 3D bar, bar and Cartesian. Supports dBASE III/IV, Clipper, QuickSilver, FoxBase+, dBase, Eagle and Microsoft Turbo and Quick C.
List: \$299 Ours: \$239
FAXcetera #: 1794-0014 Return: O
Full 60 day guarantee.

dGE Font Library Volume 1 1.0

Pinnacle Publishing, Inc.
Provides more than 40 typefaces that will add flair and professionalism to your dGE 4.x applications. Typefaces included with this package include System as well as traditional, decorative, and foreign language faces. The Font Library's typefaces are arranged into over 100 unique fonts, all designed using dGE's GFont editor, and the three included font design utilities—QuickScale, QuickRotate, and QuickFix—that allow you to modify the provided typefaces to produce the exact size and orientation you need.
List: \$59 Ours: \$53
FAXcetera #: 1794-0015 Return: O
Full 60 day guarantee.

dGE Icon Library Volume 1 1.0

Pinnacle Publishing, Inc.
The dGE Icon Library, volume 1, is a collection of 1000 icons that you can incorporate into your dGE 4.x applications. These icons can be used in an endless variety of design situations in GUI's, in legends or logos, even as error messages. The Icon Library is comprised of 126 dGE icon files, each containing 8 icons. Since all the icons were created using dGE's GFont font and icon editor, you can edit them to suit the needs of your application.
List: \$59 Ours: \$53
FAXcetera #: 1794-0016 Return: O
Full 60 day guarantee.

Database Graphics Toolkit ("dGT") 3.02

Blackhawk Data Corporation
Provides cost-effective imaging support for over 10,000 applications running under 40 different languages. PHOTO retains your text as a graphic, then superimposes a miniature copy of your image onto the screen. Photographic quality images on a standard VGA. EXHIBIT is a full-screen full-color image viewer; it's state-of-the-art anti-aliasing lets you read a full page of text on a standard monitor! LASRTRAX hard-copy routine produces presentation quality hard-copy from virtually any screen! NEW FEATURES for dGT 3.02! New Color optimization routine; now supports RBase UDF's; international MS/ DOS Code Pages; and full page document print.
List: \$345 Ours: \$305
FAXcetera #: 3051-0001 Return: L

dGT-Developer's Edition

Blackhawk Data Corporation
Blackhawk's Developer's Edition of the Database Graphics Toolkit ("dGT") consists of one copy of dGT plus six Runtime Licenses. This provides developers with the option to add imaging to existing applications by bundling a low-cost dGT Runtime License with each copy of their application. For detailed specifications see listing of Database Graphics Toolkit ("dGT") in this section.
List: \$698 Ours: \$595
FAXcetera #: 3051-0002 Return: L

dGT - Unlimited 3.02

Blackhawk Data Corporation
dGT Unlimited is a ROYALTY-FREE version of the Database Graphics Toolkit which provides imaging solutions for over 40 different languages. Features include: 256 color images or B/W; two viewers for miniature images or full-screen images; automatic scaling; hardware panning; multiple images per screen, supports PCX, DCX, GIF, SCX & PCL formats; presentation quality printing on any LaserJet series; network ready - works on standard office monitors up through super-VGA. For detailed specifications see listing of dGT Single User in this section.
List: \$595 Ours: \$535
FAXcetera #: 3051-0004 Return: L



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dGT

PAINLESS PICTURES!

dGT

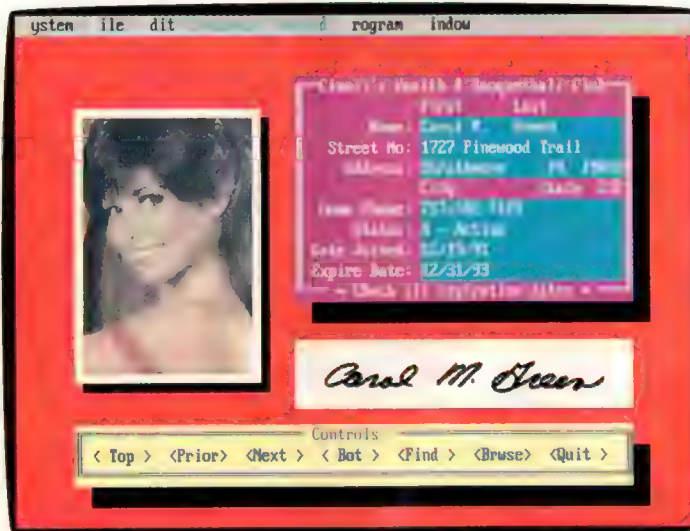
Our Database Graphics Toolkit (**dGT**) gives you sophisticated imaging in a flash: just add an image pointer to your database and hook up our software viewers!

Data Based Advisor said, "An elegant solution . . . I was up and running in 15 minutes . . . Presentation quality output. Fast and compact . . . Overall, I give it two snaps up."

PHOTO projects one or more miniaturized images over a text screen, in any of six window formats — produces photographic quality on any VGA.

EXHIBIT resizes images to fit your screen, or "pans" oversize images using the entire video buffer — state-of-the-art anti-aliasing lets you read a full page of text on any VGA.

LASRTRAX prints the screen to your laser printer, in either portrait or landscape mode — produces presentation quality hard copy from virtually any screen.



DBMS said, "An impressive collection . . . Faithful reproductions . . . Does a marvellous job . . . An outstanding value."

dGT runs on any VGA or EGA, and supports GIF, PCX, SCX, and HP PCL files in 2, 16 or 256 colors, in virtually any size, and can display images directly from memo fields and BLOBs.

Interactive "working demo" available: get "DBGREFX.ZIP" from CompuServe (GO DBA, library 4: Windows & Graphics), or any of several BBS's, like Clarion Tech Journal or Paradox Informant.

In use at over 12,000 sites, in 49 states and 38 foreign countries, **dGT** is fast, powerful, reliable, and flexible — it works with 35 different database languages — so far!

Unretouched CRT display

dGT is priced at just \$295 (Single User) or \$595 (Unlimited), plus shipping. Overnight delivery available. Visa, MasterCard, and American Express accepted.

NEW! Royalty-Free Pricing!

dGT Single User is still competitively priced at \$295, but now our new **dGT** Unlimited version, herewith (easily and with virtually unlimited royalty-free distribution rights), is available for just \$595!



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DOS DEVELOPMENT SOFTWARE

ddMap 2.0

CS Communications, Inc.

ddMap adds Graphical Location Display to Relational Database Application development. It combines images onto a common grid coordinate system and then lets the user overlay database records as icons onto these images. ddMap is perfect for creating a Graphical Location Inventory System for people, equipments, and events. Maps/drawings are stored in TIF (USA, States, Facilities, etc.). ddMap is a complete application developer and uses dBASE II files. It can be operated in Clipper compatible or standalone mode. Available in library format.

List: \$495 Ours: \$446
FAXcetera #: 1002-5701 Return: F

Es pia 2.0

Devices, Inc.

Es pia from Devices, Inc. uses an unprecedented technology to turn FoxPro-DOS into a graphical DataBase Management System. Now you can view your FoxPro data graphically without leaving FoxPro. Es pia is seamlessly integrated with FoxPro's Screen Builder, Report Writer and RQBE. Es pia allows creation of custom 2D and 3D graphs for screen display and printing. Images can be stored in memofields and displayed in a FoxPro window or printed at any size and position. Use Es pia's E-Wins to display graphs and images in moveable, resizable graphic windows. Es pia's integration with RQBE allows the output from your query to be plotted in an overlapping E-win. Es pia includes special device drivers for direct capture of images and audio from video cameras, scanners, digital cameras and audio boards. The data may be captured from a screen using a GET clause and stored in a memofield or file. Also included with Es pia is MANIPX, a powerful image conversion program. Special LAN version works with FoxPro 6-Pack.

List: \$295 Ours: \$249
LAN version List: \$395 Ours: \$335
FAXcetera #: 1005-0701 Return: F

See special bundle offer on page 9.

Es pia 2.0 Enhanced

Devices, Inc.

All the features of Es pia plus access to the underlying graphic command set. This gives X-BASE programmers the power of Es pia in an easy-to-learn API. Over 150 commands are available in the following categories: graphic primitives, image display, image processing, printing, video/scanner capture, audio record/playback. Also includes extensive on-line help system with examples and corresponding graphic output for every command. Special LAN version works with FoxPro 6-Pack.

List: \$595 Ours: \$505
LAN version List: \$695 Ours: \$589
FAXcetera #: 1005-0702 Return: F

FLIPPER Graphics Library 5.0

ProWorks

A function library that quickly and seamlessly integrates graphics into Clipper applications, featuring: an extensive variety of XY and pie charts, 3D, and area graphs; a CAD interface for drawing maps and other vector images; plus, automatic axis scaling; multiple graph types per screen; unlimited graph points; save/restore .PCX pictures; virtual printer driver capability; postscript; APGL support; CGA, EGA, VGA, and Hercules support. List: \$295 Ours: \$266
FAXcetera #: 1697-0001 Return: F

FoxGraph 1.00

Microsoft Corporation

An outstanding presentation graphics program for IBM and IBM compatible PCs. FoxGraph allows creation of custom 2D and 3D graphs for screen display & printing or export to a paint program or desktop publisher. Utility programs provided with FoxGraph allow data created with FoxPro, FoxBASE+, dBASE III PLUS, dBASE IV, or dBase to be passed directly to FoxGraph for plotting.

List: \$295 Ours: \$207
FAXcetera #: 1506-0004 Return: N

SilverPaint Library 2.0

Silverware

Draws everything from simple lines, boxes and circles to complex logos and animation. Attach an image to a database file and display the .PCX image everywhere on-screen. Palette includes 256 blendable colors, full graphics and pixel control with low overhead. Combine text with graphics. Includes full-range sound generator. On-line help for Norton Guides Database.

List: \$129 Ours: \$103
FAXcetera #: 1678-0004 Return: O
90 day money back guarantee

Sunshow 3.0

Pinnacle Publishing, Inc.

Image database for Clipper and FoxPro. Add images to your favorite database language for an innovative image database application. A complete system containing the right tools for the right job. Everything you need to make a professional, fully functional image database is included. No TSR's are necessary or required. Popular image file formats supported are: GIF, PCX, 8-, 16-, and 24-bit Targa, TIFF, etc. Full support for CGA through Super-VGA. List: \$299 Ours: \$255
FAXcetera #: 1794-0027 Return: O
Full 60 day guarantee.

Sunshow Advanced Image Toolkit 2.0

Sun Country Software

HIGH RESOLUTION Developer version. The database programmer now has image capabilities to 1024 x 768 resolution within image database applications for popular DBMS languages, dBASE III/IV, Clipper, DBXL, Quicksilver, R:Base. Includes our SVGA proprietary SUNSAY and SUNGET (high resolution versions) functions for merging text and raster-based images and for interactive data entry on image. More file format conversions (includes complete TARGA & TIFF support), merging of multiple high resolution images, proprietary color quantizing, etc. Our special device drivers are included for image capture boards, color scanners. Supported are Targa, Vision, ATronics, ComputerEyes, Mitsubishi, Sharp, Howtek, Texnai, Microtek, more. Extremely powerful and very easy to use. Professional application developer quality.

List: \$350 Ours: \$315
FAXcetera #: 2989-0003 Return: N

Sunshow Database Professional 2.0

Sun Country Software

Introductory package which includes everything needed for the database programmer to make text-based database into a full-featured image database for dBASE III/IV, Clipper, DBXL, Quicksilver. Includes our proprietary, SUNSAY and SUNGET functions for merging text and raster-based images and for interactive

data entry on an image. Many file format conversions, merging of multiple images, proprietary color quantizing, etc. Our functions work with the same logic and coding style that the DBMS programmer is comfortable with, lessening the learning curve. Supports the generic video modes-CGA through VGA and also Hercules. List: \$200 Ours: \$180
FAXcetera #: 2989-0002 Return: N

Sunshow Professional 3.0

Pinnacle Publishing, Inc.

Image database application tools for Clipper or FoxPro for high resolution image databases. Full support for CGA through Super-VGA. Combine text from record fields with images, scale, clip, push & pop windows, image processing, printing functions, more. Supports popular image file formats: GIF, PCX, 8-, 16-, 24-, and 32-bit Targa, TIFF 4.2/5.0, etc. Graphic mode say/get, and print/prints. Graphic mode Hewlett Packard Laserjet II, Paintjet, & Epson dot matrix printer support.

List: \$299 Ours: \$255
FAXcetera #: 1794-0028 Return: O
Full 60 day guarantee.

T-BASE 3.0

Videotex Systems Inc.

Clipper, dBASE, FoxPro, C users-add pictures and documents to your applications with the T-BASE library. Features include: color or B/W images, automatic scaling, multiple images. Works on super-VGA, VGA, EGA, CGA or mono, display images in any location, display images with existing text, scroll images in a window, and print images to Laserjet. NO ROYALTIES. Includes Chroma Tools, the ultimate image conversion utility. List: \$495 Ours: \$419
FAXcetera #: 8888-0001 Return: N

QUERY/REPORT GENERATORS

Clarion Report Writer 1.0

Clarion Software

Clarion's Report Writer offers the ability to use fields in data files for fast and easy generation of ad-hoc queries and reports. Performs calculations and filters on data and presents results. "Joins" separate files and reads Clarion, dBASE, DIF and BASIC files. The environment is menu-driven and features "logical" printer support. On-line context sensitive help is provided.

List: \$199 Ours: \$179
FAXcetera #: 1862-0003 Return: L


dQuery 4.5

QUADBASE SYSTEMS, Inc.

An interactive query management system and report writer for dBASE and Lotus 1-2-3 users. It supports SQL, QBE and dBASE programming constructs. It is designed for developers as well as end users who need to get information out of the data files quickly for analysis, interpretation and reporting in an ad hoc manner. The file formats supported are dBASE III/IV, Clipper, Foxbase and Lotus 1-2-3. It can import and export ASCII files. dBASE data can be reduced and saved in Lotus files and vice versa. In addition to the ad hoc query capabilities, you can also easily build executive information systems for end users. Because of its power and user friendliness, dQuery has consistently won the Data Based Advisors Reader's Choice award for the "Best query tool".

List: \$195 Ours: \$176
FAXcetera #: 1864-0001 Return: L

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Sun Country's
Professional Imaging Tools

SHOWCAT Image Catalog
Multi-format, multi-video mode SVTGA GUI image catalog supports 14 formats-GIF, PCX, TGA, Edsun CEG, FLI animation, digital audio, with graphical navigations, 3-D buttons. Attach user-defined text field notes to each image. Over 40 SCGA cards supported. \$199.95

SUNSHOWIMAGE Converter
Easy to use format converter with graphical interface. 3-D buttons, batch mode. Supports 14 formats including Edsun CEG, TARGA, TIF, PCX, GIF. Over 40 SVGA cards supported. Powerful. \$249.95

SUNSLIDE Presenter
SVGA Image slide show with scripting capabilities, supporting 14 different formats including Edsun CEG, JPEG, GIF, PCX, multi-video modes, easy installation, over 40 SVGA cards supported, more. \$99.95

SUNJPEG Ultra Compression
Your application can directly display compressed JPEG images with up to 45:1 compression ratios. Convert to/from JPEG, TGA, PCX, GIF, specify variable compression, raw/dithered, display multiple, tiled JPEGs, force video mode, YUV/YIQ, palette options, no compression boards or co-processors required. Over 40 SVGA cards supported, more. \$299.95

SUNSCAN Digital Scanware
The easiest to use DOS-based flat bed scanner program according to PC computing. Image processing, SVGA support-over 40 SVGA cards, supports Sharp, Howtek, Epson, Microtek, H-P, Texnel. Scans PCX, GIF, Edsun CEG, and TIF and Targa to 24-bit. Graphic printing support. \$299.95

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By running your database under graphics mode, Espia lets you enjoy a graphical windowing environment, including the unique ability to work simultaneously with text and graphics, even while running under MS-DOS.

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To order either Standard Espia, or the Enhanced Espia for FoxPro or dBase IV, call Devices, Inc. at 1-805-565-3838.

We'll help you add the power of pictures to your database. Together.

FoxPro - DOS

OUTPUT TRACKS BROWSE

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ESPRA

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SYSTEM REQUIREMENTS: IBM or compatible PC, dBase IV or FoxPro 2.x, EGA, VGA or Super-VGA, CPU-80286
SUGGESTED: 80386/486, Mouse **OPTIONAL:** Extended or Expanded Memory, Scanner, Video Capture Board, Audio Board
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Grumpfish Reporter Standard Version 1.0

Grumpfish, Inc.
Grumpfish Reporter is a full-fledged report and ad-hoc query manager. Its intuitive pull-down menu structure allows end users to be more productive immediately without having to overcome a steep learning curve. Grumpfish Reporter is written 99.9% in Clipper 5.01, and well-commented source code is available. This means that Clipper 5.01 developers can link any or all Grumpfish Reporter modules directly into their applications.
List: \$159 Ours: \$135
FAXcetera #: 2409-0001 Return: L

Grumpfish Reporter Developer's Version 1.0

Grumpfish, Inc.
The Developer's Version includes all of the Clipper 5.01 source code, which enables you to link any or all of Grumpfish Reporter directly into your Clipper application. (Because Grumpfish Reporter uses many functions from Grumpfish Library, you will require Grumpfish Library in order to link.
List: \$159 Ours: \$135
FAXcetera #: 2409-0002 Return: L

Neural/Query 1.0

IntelligenceWare, Inc.
Use neural networks and fuzzy technology to generate answers to inexact queries. Neural/Query finds partial matches and provide "Best Guesses" with the help of a user friendly concept dictionary. Human-like thought patterns such as young, old, short or tall can now be incorporated into queries based on the users weighting and definition.
List: \$490 Ours: \$449
FAXcetera #: 1798-0004 Return: L

ProPrint Report Generator 2.1

Conquest Data Systems
One version supports ALL. PARADOX, Btrieve, dBASE compatible, ASCII, and binary data file formats. Full screen interface allows developers or end-users to interactively create and run reports using easy-to-use WYSIWYG line and field formatting. Send output to screen, disk, or printer. Rich set of functions for creating user subroutines to perform math and string operations, loops, and logic. Complete on-line help. Optionally, generate C code for creating .EXE. ORACLE database support using Pro*C.
List: \$189 Ours: \$170
FAXcetera #: 1004-5101 Return: N

Q+E Database Server Edition 2.6

Pioneer Software
A Windows and OS/2 query and editing tool to display, query, sort, search, join and edit relational data. Supports DDE to hotlink data into any other application and is simple enough for all users. Can access data from dBASE, Paradox, Oracle, DB2, SQL*Server, Sybase, Netware SQL, EE Database Manager, text files, and Excel files.
List: \$299 Ours: \$269
FAXcetera #: 2625-0001 Return: F

Q+E Database Library (QELIB) 1.0

Pioneer Software
A set of Dynamic Link Libraries providing a common call level interface for developer tools such as Visual BASIC, ToolBook, Actor, Smalltalk, C, C++, etc. and most macro language products to access data from Oracle, SQL Server, Sybase, EE Database Manager, DB2, Netware SQL, dBASE, Paradox, Excel, and Text files.
List: \$299 Ours: \$279
FAXcetera #: 2625-0002 Return: F

R&R Report Writer for dBASE and compatibles 4.0

Concentric Data Systems, Inc.
A full-featured relational Report Writer for dBASE compatible databases. Designed for end-users or developers, reports can be created faster and more easily than with dBASE or other databases, without requiring any programming. Reports can be called from within application programs using the R&R Runtime Module included free with an unlimited license. R&R brings enhanced printer drivers, proportional font support, graphics-based page preview, instant reports, and pre-processed totals to dBASE report writing. LAN Six-Pack licenses are available with serial numbers for six additional users.
List: \$249 Ours: \$159
FAXcetera #: 1638-0003 Return: F

R&R Report Writer for Netware SQL/Btrieve 3.0

Concentric Data Systems, Inc.
This is a full-featured, relational Report Writer for NetWare SQL, and XQL or Btrieve databases running in a NetWare environment. Like R&R for dBASE, it is designed for end-users or developers. Reports can be created quickly and easily, without requiring any programming or knowledge of SQL, and it is simple enough for end-users to create their own reports. Reports can be called from within applications using the R&R Runtime Module included free with unlimited distribution license.
List: \$299 Ours: \$269
FAXcetera #: 1638-0007 Return: F

R&R Report Writer for Paradox

Concentric Data Systems, Inc.
This is a full-featured, relational Report Writer for Paradox tables and databases. Designed for end-users or developers, reports can be created faster and more easily than with Paradox, without requiring any programming. Reports can be called from within PAL application programs using the R&R Runtime Module included free with an unlimited distribution license. With the same features as R&R for dBASE, Paradox reports can now be created using R&R's enhanced printer drivers, proportional font support, graphics-based page preview, instant reports, and pre-processed totals. LAN Six-Pack licenses are available with serial numbers for six additional users.
List: \$249 Ours: \$159
FAXcetera #: 1638-0006 Return: F

SQL

ERwin/ERX 1.1

Logic Works
Logic Works ERwin/ERX adds flexible import/export capabilities to the features of ERwin/SQL (see separate listing). This powerful reverse-engineering capability can help you perform such tasks as maintaining and enhancing your existing databases or migrating your applications from one DBMS to another. ERwin/ERX generates SQL CREATE TABLE and CREATE INDEX code for DB2, ORACLE, INGRESS, INFORMIX, NETWARE/SQL, SQL Server, Sybase, and other SQL databases directly from your design.
List: \$2495 Ours: \$2246
FAXcetera #: 2666-0003 Return: N

ERwin/SQL 2.0

Logic Works
A powerful Entity-Relationship (ER) logical data modeling tool under Windows or Macintosh. Supports: entity, attribute, and relationship definition; primary and foreign key identification; referential integrity constraints; business rules; inversion entries; foreign and alternate key entries. Transforms logical model into physical schema and generates SQL DDL scripts for many relational systems, including DB2, Ingres, ORACLE, SQLBase, SQLServer, and Sybase. Produces presentation quality graphic diagrams. Affordable and easy to learn and use.
List: \$995 Ours: \$896
FAXcetera #: 2666-0001 Return: N

FirstSQL - RDBMS 2.0

FFE Software, Inc.
FirstSQL is an implementation of ANSI standard SQL with DB2 extensions. FirstSQL's 4GL programming language allow developers to use dBASE files or SQL relations stored with FirstSQL's own file structures. One of FirstSQL's extensions to standard SQL includes the ability to freely intermix 4GL and SQL statements. FirstSQL's 4GL is a complete applications development environment with integrated windowing capabilities. Also offers support for referential integrity and an implementation of the three-value logic proposed by E.F. Codd, including the MAYBE operator, which solves the EXIST problem. The NULL keyword is bolstered by support for MISSING and UNKNOWN. FirstSQL runs in 512K. Network Version available.
List: \$495 Ours: \$446
FAXcetera #: 1794-0018 Return: N

RaSQL/B 6.0

Pinnacle Publishing, Inc.
RaSQL/B gives the Clipper or FoxPro programmer access to the world of Btrieve data files. Using this library, you can access both Btrieve files and dbf files in the same applications and transfer data between them. You can use Clipper-like commands (n_xuse, n_xskip, n_xgototop, etc.) to access Btrieve data. RaSQL allows access to the data of many commercial packages that use the Btrieve file format. There are also conversion utilities to move Clipper or FoxPro data to this more efficient method of data storage.
List: \$349 Ours: \$314
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0018 Return: O
Full 60 day guarantee.

SCREENS/MENUS

SayWhat?! 4.0

Software Science, Inc.
SAYWHAT?! is a standalone, all-in-one toolkit for quickly creating screens for menus, data entry or display, help panels and even "slide" shows. SAYWHAT?! screens can be displayed from any programming language with a single line of code. SAYWHAT?! also creates screens quickly and easily for use by non-programmers from the keyboard and through batch file "SCRIPTS".
List: \$50 Ours: \$45
FAXcetera #: 1804-0002 Return: F

ProPrint Report and C Code Generator

Use ProPrint to quickly create any type of report from dBASE, PARADOX, Btrieve, and ASCII data file formats.

Easy to learn, easy to use. ProPrint provides a consistent method of reporting from a number of database formats. Using a full screen, menu driven user interface, anyone can create reports which can be viewed on screen, or output to a printer or disk data file. Establish 1-to-1 and 1-to-many file relationships between any of the supported file formats. Powerful record selection and sequencing on any fields in a file. Record grouping for up to 4 levels and final totals. Many data types supported. Customize font and printer support. Box drawing mode. Complete set of powerful functions for creating user defined sub-routines to perform math and string operations, nested decision logic, loop structures, and much more...

Use the C Code Generator and your favorite C compiler to instantly create a stand alone executable (.EXE) for any ProPrint report application. (Significantly increases execution speed).

Price:	ProPrint Report Generator	\$189
	C Code Generator option	\$219

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DOS DEVELOPMENT SOFTWARE

RaSQL/X 6.0

Pinnacle Publishing, Inc.

With RaSQL/X, Clipper programmers can finally enter the world of true Client/Server processing. Using the SQL language, your programs can tie into Novell's Netware SQL. This database server supports a complete set of the SQL language. Since RaSQL is implemented as a library, you can access both Netware SQL database files and regular Clipper dbf fields and move information between them. The emphasis in this product is to provide both the full benefits of a client/server system with the feel of the regular Clipper language.

List: \$349 Ours: \$314
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0018 Return: O
Full 60 day guarantee.

TRANSLATORS/BRIDGES

Data Transfer Utility 1.1

IntelligenceWare, Inc.

A powerful and flexible tool to enable you to convert database from and to several database formats including, ASCII, SQL, dBASE, Lotus, and Hypertext. DTU may be used as either a DOS or a Windows based application.

List: CALL Ours: CALL
FAXcetera #: 1798-0010 Return: N

CLIPWKS 1.0

Grumppish, Inc.

CLIPWKS enables you to translate Lotus or Quattro spreadsheets to database without bloating your executable file. Reading in the contents of an entire spreadsheet requires only 10K of overhead, and writing on a separate spreadsheet requires only 7K. CLIPWKS is the only Clipper add-on product that supports Lotus 3.x, Quattro, and Quattro Pro spreadsheets. (Also supports Lotus 2.x). CLIPWKS features both high level and low level functionality. Its "metafunctions" allow the developer to read and write spreadsheets with one function call.

List: \$199 Ours: \$179
FAXcetera #: 2409-0003 Return: L

UTILITIES

Banalyze 2.0

Information Architects, Inc.

B analyze is a powerful Btrieve application debugger. It intercepts calls to the Btrieve record manager and displays the parameters and buffers in a pop-up window. Since it is a TSR (19K), Banalyze will monitor Btrieve. Call from applications written in any language. Trap Btrieve call by file before, after, or only those returning errors. Pertinent information can be logged to disk for viewing at a later time. Also debugs the Btrieve access of XQL/NetWare SQL programs.

List: \$99 Ours: \$90
FAXcetera #: 2390-0001 Return: F

Bcheck 2.0

Information Architects, Inc.

Bcheck analyzes Btrieve file structures for damaged indexes and/or data. Produces a Btrieve Damage Assessment (BDA) report. Price includes free analysis by technician.

List: \$99 Ours: \$90
FAXcetera #: 2390-0002 Return: F

Bcreate 1.0

Information Architects, Inc.

Bcreate uses menus and dialog boxes to easily and quickly define Btrieve files. The parameters and index structures of existing files can be displayed, modified, or printed. ASCII description files compatible with Novell's BUTIL program can be generated. All the rules are programmed in to reduce the need for a manual.

List: \$29 Ours: \$25
FAXcetera #: 2390-0003 Return: F

Bedit 2.1

Information Architects, Inc.

Bedit is a utility for users of Novell's Btrieve record manager. It will display any Btrieve file or XQL/NetWare SQL table. Data can be displayed in ASCII, hex, or 3-D (Dictionary Driven Display). Records can be updated or inserted using the 3-D format. Records can be selectively copied between Btrieve files, deleted, or saved to a DOS ASCII file. Export records in SDF (comma-delimited) format for import to Lotus, dBASE, PC Write, etc. Build test files from production data in minutes using the clone and copy function.

List: \$99 Ours: \$90
FAXcetera #: 2390-0004 Return: F

Brun 2.0

Information Architects, Inc.

Brun is essentially a replacement for the Btrieve BUTIL program. The three major advantages to Brun are: Run-time License, C source code included, and additional utilities to recover data. Brun is divided into 16 separate programs for simplicity and speed. Brun will clone existing files, repair damaged file headers, save/load data to/from ASCII files, copy records between files, and check Btrieve file integrity. Manual with extensive instructions on data recovery ins included.

List: \$189 Ours: \$169
FAXcetera #: 2390-0005 Return: F

Xsupport for DOS/Xsupport for Windows

Information Architects, Inc.

Xsupport is a database administration tool for Novell's XQL/NetWare SQL data dictionaries. Create tables (Btrieve) files, or modify existing data structures. All parameters for underlying Btrieve files are supported. Document Btable and view information to file or printer. Builds Btrieve/XQL dictionaries compatible with Object Vision, R&R, Forest & Trees, and Novell's Xtrieve. XQL not required. Single-user DOS and Windows 3.0 database interface included. Great Btrieve Utility. Versions for DOS test and Windows 3.0.

List: \$149 Ours: \$135
FAXcetera #: 2390-0006 Return: F

ADDITIONAL PRODUCTS

Clarion LEM Maker 1.0

Clarion Software

A collection of tools that help you create Language Extension Modules for Clarion programs using Borland International's Turbo C Compiler and libraries. It contains three components: LM, CLA, LM.LIB, and MATRIX/DSPFILE. You can use any assembler that is source code compatible with Microsoft's MASM.

List: \$199 Ours: \$179
FAXcetera #: 1862-0008 Return: L

dSALVAGE 1.44

Comtech Publishing Ltd.

Diagnoses, repairs and edits DBF data files. It is menu and prompt driven. dSALVAGE features include: check the file and tell you how it is damaged; automatically fix the damage with a few keystrokes; and recover ZAP'd files with one keystroke. dSALVAGE contains header/record/byte-stream editors that allow you to search, modify and move data in ways not possible from within dBASE nor with any conventional editor. Supports dBASE (all versions), FoxBASE, dBXI.

List: \$100 Ours: \$90
FAXcetera #: 2252-0001 Return: F

dSALVAGE PROFESSIONAL 3.0

Comtech Publishing Ltd.

Adds to dSALVAGE's diagnose/repair/edit features: command-line diagnostics; faster repairs of large data files with scattered damage; enhanced unZAP; header builder; hex/ASCII editor; Clipper, Foreign Language, and Extended ASCII Characters switches; compatibility with large disk partitions. It comes bundled

with Diskminder sector editor. Is compatible with all versions of dBASE, FoxPro, FoxBASE, Clipper, and any data files that conform to the DBF file standard. PC WORLD's Best Buy, Data Based Advisor and DBMS Magazine's Readers' Choice.

List: \$200 Ours: \$185
FAXcetera #: 2252-0002 Return: F

DVT: Data Visualization Tool 1.1

IntelligenceWare, Inc.

A database visualization program that analyzes large databases, extracts their shape, and graphically displays them. It selects graph types based on its analysis of each field type and the characteristics of the data items. DVT graphs large databases by distilling the shape of the data through a special set of data extraction algorithms.

List: \$490 Ours: \$441
FAXcetera #: 1798-0005 Return: N

RaSQL/X 5.2

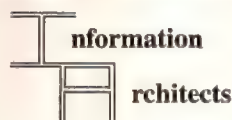
Pinnacle Publishing, Inc.

With RaSQL/X, Clipper or FoxPro programmers can finally enter the world of true client/server processing. Using the SQL language, your programs can tie into Novell's Netware SQL. This database server supports a complete set of the SQL language. Since RaSQL is implemented as a library, you can access both Netware SQL database fields and regular Clipper or FoxPro dbf fields and move information between them. The emphasis in this product is to provide both the full benefits of a client/server system with the feel of regular Clipper or FoxPro language. Specify: Clipper or FoxPro version.

List: \$349 Ours: \$314
FAXcetera #: 1794-0012 Return: O
Full 60 day guarantee.

Bsupport® for Btrieve®

- Bedit** - view & edit Btrieve files
- Banalyze** - Btrieve application debugger
- Brun** - BUTIL replacement
 - Run-Time License
 - C Source Code
 - Additional Functions
 - DOS, OS/2 Protected Mode
- Bcreate** - Btrieve® file creation utility
- Bcheck** - diagnose data problems



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Xport - Import/Export data in SDF, CDF,
and dBASE III. Source included.



See page 176 for
FAXcetera®
instructions.

DOS DEVELOPMENT SOFTWARE

DEBUGGERS

CodeWatch 5.0

Liant Software Corporation

A window-based source-level debugger that operates with all of Liant's compilers. Using CodeWatch, the user interacts in the conventions and symbols of the source language, not the machine language. The window interface makes debugging sessions very efficient by displaying the user's source program and program output simultaneously, while allowing user interaction with the debugger either by entering commands or by using pull-down menus and dialogs. Depending on the environment, the user may choose either a graphical-based interface or a character-based interface. CodeWatch's graphical-based interface uses all the capabilities of the powerful Motif user interface and X windows.

List: \$795 Ours: \$679
FAXcetera #: 1952-0016 Return: F

FlashView

FlashTek, Inc.

Full 32-bit source level debugging for C++, C and assembler programs with proper C++ naming. Unlimited number of breakpoints and trace points. Configurable multiple text Window UI with full mouse support. Full access to all variables, memory, registers, classes, structures, pointers, etc. Record source lines and variables in a history buffer for those hard-to-analyze logic bugs. Run-time memory protection scheme to isolate pointer bugs. Supports dual-monitor debugging. Execution time recording for timing analyses.

List: \$250 Ours: \$215
FAXcetera #: 1002-9203 Return: F

MultiScope Debuggers for DOS for Borland C++ 2.0

Symantec Corporation

The MultiScope Debuggers for DOS for Borland provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, the CommandBar for frequently executed debugging commands, character mode/Windows user interfaces with dual monitor option, Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, 16 different program views, shows complex data structures graphically. Supports Borland C++ 3.0 and 3.1, Turbo Pascal 6.0, and Turbo Assembler. Windows user interface requires MS Windows 3.x. Not available to customers in France.

List: \$179 Ours: CALL
FAXcetera #: 2575-0003 Return: F

MultiScope Debuggers for DOS for Microsoft C/C++ 7.0 2.0

Symantec Corporation

The MultiScope Debuggers for DOS for Microsoft C/C++ 7.0 provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, P-mode/Windows user interfaces with dual monitor option. Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, 16 different program views, shows complex data structures graphically. Supports Microsoft C/C++ 7.0. Windows user interface requires MS Windows 3.x. Not available to customers in France.

List: \$179 Ours: CALL
FAXcetera #: 2575-0004 Return: F

Periscope/EM

The Periscope Company, Inc.

A professional software only debugging solution that runs in extended memory, where it is write-protected and out of the lower 640K. This allows for source-level debugging of TSRs, device drivers, interrupt-driven programs, even add-in ROM and ROMBIOS. Offers a software only solution to the programmer's dilemma of needing all the base of 640K. This debugger runs out of extended memory when used with Qualitas' 386MAX and BlueMAX or Helix's NETROOM memory manager. The supporting memory managers also write-protect the memory used by the debugger so the debugger is safe from being overwritten by a runaway program. Fast because it runs from 32-bit extended memory; it doesn't use conventional memory that the program being debugged may need; it's protected from being corrupted; and it provides crash recovery via the break-out switch.

List: \$295 Ours: \$266
FAXcetera #: 1576-0005 Return: F

Periscope Model II, II-X 5.2 (STD)

The Periscope Company, Inc.

Full-function debugger with symbols and source-level support for most Microsoft and Borland languages. Pull-down menus, dual monitor support, 386 debug register support, hot keys, user exits, and much more. Works on PC's and PS/2's. Includes break-out switch enabling recovery from a hung system. No board required.

Model II List: \$225 Ours: \$203
Model II-X List: \$195 Ours: \$176
FAXcetera #: 1576-0002 Return: O
May charge up to 15% restocking fee on returns (must be within 30 days).



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Periscope Model IV 5.2 (EM)

The Periscope Company, Inc.

Full-function hardware-assisted debugger. Software supports symbols and source-level debugging of most Microsoft and Borland languages. Break-out switch enables recovery from a hung system. Board's hardware breakpoints and hardware trace buffer provide real-time capabilities: to trap memory and port reads/writes/executes without slowing execution, and to record exactly what has occurred in real-time, including hardware interrupts. Works on 286's, 386's, and 486's running up to 33MHz. CPU specific Pod is required. Plus board (optional) keeps Periscope from using any lower 640K. Software same as Periscope/EM.

List: \$1195-\$2795 Ours: CALL
FAXcetera #: 1576-0004 Return: O
May charge up to 15% restocking fee on returns (must be within 30 days).



C-Clearly® C & C++ Source Code Formatter

Confusing Code?

```
#include <stdio.h>
text_count() /* count lines, words, and characters */
(int c, nlines, nwords, nchars, inword;
inword=NO; nlines=nwords=nchars=0; while((c
=getchar())!=EOF){++nchars; if (c=='\n')
++nlines; if ((c==' ') || (c=='\n')) inword=NO; else
if (inword==NO){inword=YES; ++nwords;} printf(
"%d %d %d\n", nlines, nwords, nchars);}
```

C It Your Way!

```
#include <stdio.h>
text_count () /* count lines, words, and characters */
{
    int c, nlines, nwords, nchars, inword;

    inword = NO;
    nlines = nwords = nchars = 0;
    while ((c = getchar()) != EOF) {
        ++nchars;
        if (c == '\n')
            ++nlines;
        if ((c == ' ') || (c == '\n'))
            inword=NO;
        else if (inword == NO) {
            inword = YES;
            ++nwords;
        }
    }
    printf ("%d %d %d\n", nlines, nwords, nchars);
}
```

(Just one of an infinite number of styles.)

AUTOMATICALLY FORMATS C AND C++ source code exactly the way you want it. C-Clearly's context sensitive analysis will format any C or C++ program in your own personal or corporate style.

C-CLEARLY'S STYLE TEMPLATES are a snap to modify, since they resemble the C source code you edit into your preferred format. Templates are included for several common styles as well as standard K & R.

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MAKES OBTUSE CODE CLEAR. Allows all of your source code to be presented in a consistent format of your choosing. Also great for code walk-through and final documentation listings.

WORKS with all IBM PC, XT, AT, PS/2 and compatibles, with 512K RAM, PC or MS-DOS. Automatically processes all include files and preprocessor statements. ANSI-C compatible.



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DOCUMENTATION FLOWCHARTING

all CLEAR 1.1

Clear Software

Automatically creates presentation quality flowcharts, treacharts, procedure diagrams, decision trees, and org charts from plain English descriptions. Multi-page diagrams, user-definable symbols, text centering, and more. Import files from any word processor or Lotus work sheets. Output to screen, printers, PostScript, and desktop publishing systems.

List: \$300 Ours: \$269

FAXcetera #: 1853-0002 Return: F

C-Clearly 1.7

V Communications, Inc.

C context sensitive analysis formats any C program in your exact personal or corporate style. Easy to modify C-like templates are included for several common styles and standard K & R. Listings can also be created with optional highlights, line numbers, flow lines, and headers and footers. Automatically processes include files and pre-processor statements. ANSI-C compatible.

List: \$130 Ours: \$117

FAXcetera #: 1828-0005 Return: F

C-DOC Documentation Tools 5.0

Software Blacksmiths, Inc.

Automated Documentation of C and C++ programs. C-DOC is a set of easy-to-use tools which need no source code changes, and which produce ASCII output files suitable for any printer or word processor. These tools save hours of documentation and debugging since they produce clear and accurate documentation automatically. C-DOC is a single

program which is a fully-integrated version of the 5 component programs: C-CALL; C-METRIC; C-REF; C-LIST; and C-CMT (each described below). The C-DOC program comes with both a DOS and a protected-mode OS/2 version (the 5 component programs only come as DOS versions).

List: \$189 Ours: \$149

FAXcetera #: 2296-0001 Return: L

C-DOC Professional 1.0

Software Blacksmiths, Inc.

Software Blacksmiths C-DOC Professional Documentation Tools. This has all the same features as C-DOC, but includes a Hard Disk based version of the program for processing very large programs (up to 150,00 lines) as well as an OS/2 protected mode version of the program and a Windows 3.x version of the program! It also includes a 2-part C-Doc which generates an internal data-base which can then be used to generate whichever final reports are desired. C-DOC Professional also includes an enhanced 3-ring binder/case documentation package.

List: \$299 Ours: \$269

FAXcetera #: 2296-0007 Return: F

C-CALL Caller/Called Functions 5.0

Software Blacksmiths, Inc.

Produces a graphic "tree diagram" to show the caller/called hierarchy of functions within a collection of "C" or "C++" files. It also produces a function-versus-files table of contents, and creates various summary or detailed cross-references of function definitions and usage.

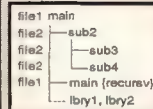
List: \$69 Ours: \$62

FAXcetera #: 2296-0003 Return: L

C AND C++ DOCUMENTATION

C-METRIC™ (\$59) COMPLEXITY / QUALITY

- Calculates "cyclomatic" path complexity for functions and system
- Counts lines with comments, code, and 'C' statements



C-CALL™ (\$69) FUNCTION HIERARCHY

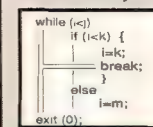
- Tree-Diagram showing function hierarchy
- Table-Of-Contents of functions versus files
- Summary and detailed cross-reference of functions

C-CMT™ (\$69) FUNCTION COMMENT

- Generates and inserts function comment blocks
- Can be re-run to update the comment blocks
- Retains any user-generated comments

```

/FF-----
sub2 USERS: main
CALLS: sub3 sub4
PARAM: arg1 arg2
LOCAL: var1
GLOBAL: var2 var3
    
```



C-LIST™ (\$69) LISTS OR REFORMATS

- Action-Diagrams show logic/control flow
- Optional line numbers, page numbers, and titles
- Reformats source to various standardized formats

C-REF™ (\$59) CROSS-REFERENCES IDENTIFIERS

- Local/parameter/global/define summary or cross-reference
- Produces class-hierarchy tree-diagram for C++ classes

SPECIAL: (\$199) C-DOC™ DOS Package (\$325 Value)

- All 5 programs fully integrated as 1 overall C-DOC program
- Processes multiple directories/files up to 15,000 total lines
- Unconditional 30-day money-back guarantee of satisfaction

NEW: C-DOC™ Professional (\$299): DOS, OS/2, Windows

- Processes 150,000 lines, 3-ring binder/case, 2-pass deferred reports

!! NEW 5.0 !! Point-and-click G.U.I. operation !!

SOFTWARE BLACKSMITHS INC

6064 St Ives Way, Mississauga
ONT Canada L5N-4M1



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CLint™ Syntactically checks one or more of your C source code files & generates ANSI function prototypes. Use this to find those latent programming bugs!

CFlow™ Shows how a program is organized, what is in the runtime library, and draws function graphs. Quickly shows you function hierarchy and functionfile inter-dependencies.

CPrint™ Reformats and beautifies your C and C++ source code. Makes code easy to read and ends disputes on source code formats.

CXref™ Cross references and checks usage of up to 18 different classes of symbols in your C and C++ source code. Cross references any size program and number of listings.

CritPath™ Determines a program's critical path. Helps you improve your program's performance. (PC-DOS only)

CCoec™ Translates C and C++ declaration statements to and from English. Helps you decipher those complicated C variable declarations and construct new ones.

CHint™ Highlights and prints your C and C++ source code. Great for creating your final documentation (MPW only)

Cpre™ Preprocesses C and C++ source code files that have ANSI macro definitions. Helps you port ANSI C code to/from your target environment.

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C & C++ Tools

New Edition

New 3.0 Release

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- New support for default and unlimited arguments
- More options, new features and new reports...

New PC 386 Extended Memory Edition

A collection of our most popular tools (CFlow, CLint, CXref, ...) can now utilize up to 32Mb of physical memory for blazing speed and the support of HUGE programs.

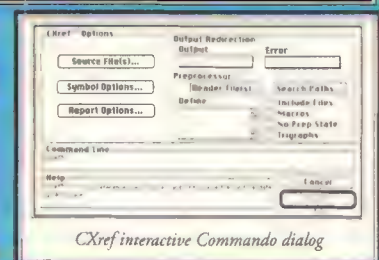
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DOS DEVELOPMENT SOFTWARE

C-CMT Comment Blocks 5.0

Software Blacksmiths, Inc.

Creates a "comment block" for each function, showing the function and identifier usage within each function. It can automatically, at the beginning of each individual function, insert these comment-blocks back into the source code. It can then be re-run, at a later date, and will update its comment-blocks (while leaving any user-generated comments alone).

List: \$69 Ours: \$62
FAXcetera #: 2296-0003 Return: L

C-LIST Source List or Reformat 5.0

Software Blacksmiths, Inc.

Lists programs with optional page titles and/or line numbers. It creates graphic "action-diagrams" of the logic/control structure within functions, and can reformat source programs into standardized formats.

List: \$69 Ours: \$62
FAXcetera #: 2296-0006 Return: L

C-METRIC Complexity/Quality Tool 5.0

Software Blacksmiths, Inc.

NEW! Calculates the path "cyclomatic" complexity for each function, and counts the number of: lines; "C" statements; code lines; complexity; and comments (for each function, and for the system as a whole).

List: \$59 Ours: \$53
FAXcetera #: 2296-0004 Return: L

C-REF Identifier Cross-Reference 5.0

Software Blacksmiths, Inc.

Creates various summary or detailed cross-references of: local; global; define; and parameter usage. It also creates a class-hierarchy "tree-diagram" for C++ classes.

List: \$59 Ours: \$53
FAXcetera #: 2296-0005 Return: L

C Programmer's Toolbox™/PC Volume 1 3.0

MMC AD Systems

Volume 1 contains 12 tools that work with Microsoft C, Borland C++, ANSI C. These tools will reformat your source code into your programming style, determine and graph program functions and determine file organization and hierarchy, identify unused functions and runtime library usage, profile program execution including BIOS interrupts and DOS system call usage, 'dump' files and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6901 Return: F

C Programmer's Toolbox™/PC Volume 2 3.0

MMC AD Systems

Volume 2 adds 9 more tools for C and C++ that will identify latent programming bugs such as uninitialized local and global variables, bad call sequences, misplaced punctuation and assignment and conditional operator mix-ups (lint); generate function prototype files, cross reference and check symbol usage across ANY number of files, determine a program's critical execution path, difference text files, locate lost files and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6903 Return: F

C Programmer's Toolbox™/PC Volume 3 3.0

MMC AD Systems

Volume 3 adds 12 more tools for all types of programming environments including C and C++. The tools include a C/C++ declaration statement translator to and from English, a C/C++ preprocessor that is also ANSI compliant, file/directory/device archiving with the industry's best compression rate and royalty free distribution, file/directory/program aliasing (Unix style symbolic links) that is Windows 3.x compatible and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6904 Return: F

C Programmer's Toolbox™/PC Programmer's Toolbox™/PC (Any 2 Volumes, or all three)

MMC AD Systems

Provides a variety of tools that supports the software development process including: software analysis, software modification and test, performance analysis and documentation. Enables you to select any two PC volumes from the Toolbox for C, C++ or any other type of product development and support.

Any two List: \$225 Ours: \$199
All three List: \$300 Ours: \$270
FAXcetera #: 0021-6904 Return: F

C Programmer's Toolbox™/PC 386 Extended Memory Edition 3.0

MMC AD Systems

Quickly analyze, cross reference and/or semantically check HUGE programs in up to 32 MB of physical memory on your 386/486... systems. Or, search for complex strings throughout your disk, system and/or network.

List: \$225 Ours: \$199
FAXcetera #: 0021-6905 Return: F

C Programmer's Toolbox™/PC Professional Edition 3.0

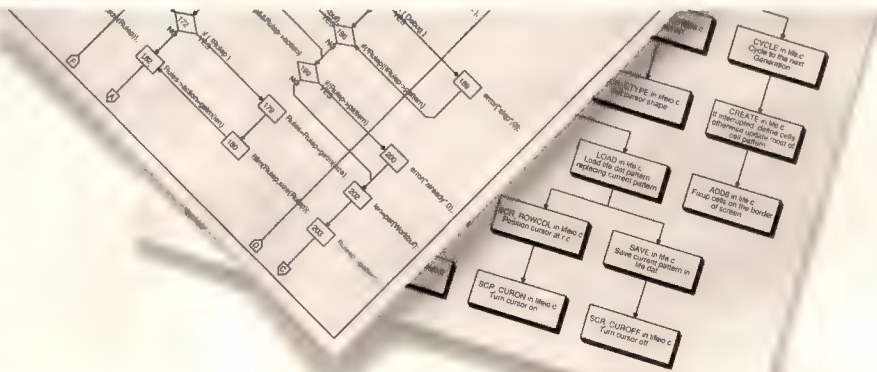
MMC AD Systems

With both the C Programmer's Toolbox/PC Volumes 1,2 and 3 and the 386 Extended Memory Edition, The Professional Edition makes for a powerful combination that can handle most of your C and C++ software engineering/re-engineering and documentation needs.

List: \$395 Ours: \$359
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on pages 11 & 12.



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John Dvorak called it "Just what the doctor ordered." Adam Green said "It's every developer's dream come true." Bob Alonso wrote "It can save days of reading listings and of taking guesses." C Gazette agreed: "If you're maintaining spaghetti code, CLEAR amply fits the bill." and that's just a sampling of the praise and awards heaped onto CLEAR. Why?



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DOS DEVELOPMENT SOFTWARE

CLEAR for C 1.0

Clear Software

Helps C developers understand and document their code by automatically producing these high-resolution diagrams: program flow charts, multi-level tree charts, formatted source listings, function cross references, and prototype files. While it processes C applications, it analyzes program's logic and reports logical inconsistencies and syntactical errors. Supports Microsoft C, Turbo C, and any generic C compiler.

List: \$199 Ours: \$175
FAXcetera #: 1853-0001 Return: F

Code Craft 3.0

Fabian Software, Inc.

Code Craft is the only tool that can create, revise, and print Nassi-Schneiderman charts interactively on the PC. Support and teaches top-down design and step-wise refinement. Convert charts into code modelled after C, COBOL, FORTRAN, PL/I. Define variables and statement blocks based on language model chosen. Has syntax checkers for C, PASCAL, and FORTRAN. Also supplies program prototypes. Great for designing, walk-throughs, and specs. Requires DOS 2.0 or higher, EGA adapter. Has an extensive help facility.

List: \$195 Ours: \$175
FAXcetera #: 1004-9601 Return: L

DocMaker 1.1

Task Software

Automated documentation system. Create professional User Manuals up to five times faster! Manuals include Table of Contents, Index, Getting Started, Reference, Tutorials, Figures, and more! "Intelligent Text" writes up to 90% of the manual based on your logical system definition. Totally flexible and customizable. Laser fonts, PCX graphics. Mouse support, online help, pulldown menus.

List: \$200 Ours: \$179
FAXcetera #: 1004-9001 Return: F

EasyFlow 7

HavenTree Software Limited

A diagramming program dedicated to the fast creation and modification of flowcharts, data flow diagrams, org charts and a great many others. The program automates many functions including line route generation, centering of text in shapes, placement of text along lines, 3D (multi-level) charting, network compatibility (specific Novell support), full color support and over 270 output devices supported.

List: \$280 Ours: \$189
FAXcetera #: 0305-0001 Return: L

Flow Charting 3 2.0

Patton & Patton Software Corporation

Flow Charting 3 meets your need for a truly universal charting program. Its versatility allows you to easily create flowcharts, data flow diagrams, process control, and organizational charts. Place shapes, text, and lines anywhere on your page. Design your charts in portrait or landscape form. Other features include: multi-page charts, import/export capabilities, 300 dpi laser and 24-pin printer support, and international character support.

List: \$250 Ours: \$195
FAXcetera #: 2665-0001 Return: O
Satisfaction Guaranteed.

Source Print+ 5.0

Powerline Software, Inc.

Source Print+ is a utility for formatting, organizing, and cross referencing source code. As a source code formatter, Source Print+ outlines nested structures, automatically indents source code, numbers source lines, highlights desired keywords, and prints imbedded titles. Source Print+ can also produce a cross reference showing the hierarchy of function calls in three different levels of detail. Source Print+ can be run either through the command line or through the new Windows interface. Output is directed to a file, the screen or to any printer. Source Print+ is available for DOS/Windows in 5 versions: C/C++, Pascal/Modula-2, FORTRAN/BASIC, dBASE/Paradox/SQL, and the Deluxe Edition which supports all of these languages.

List: \$169 Ours: \$145
Deluxe Edition: List: \$249 Ours: \$215
FAXcetera #: 1543-0001 Return: O
Full 60 Day Guarantee.

ManualWriter 1.0

Kedwell Software, Inc.

Creates your manual by documenting the functionality of each component of your application as you are designing it. Details all menus, sub-menus, forms, browses, reports and more down to the field level. Creates table of contents and indexes. Simply import ManualWriter's draft into your word processor for final editing. Requires Kedwell Software's DataBoss version 3.5.

List: \$249 Ours: \$224
FAXcetera #: 3758-0002 Return: F

DOS EXTENDERS

286 / DOS-Extender SDK 2.0

Phar Lap Software

Enables software developers to build 16-bit protected mode applications with Microsoft C, Borland C++, and Microsoft FORTRAN. Break the 640K DOS memory barrier and access up to 16 megabytes of memory. 286/DOS-Extender, which can be bound within the application, is invisible to the end user.

List: \$495 Ours: \$435
FAXcetera #: 1490-0010 Return: F

X-32VM

FlashTek, Inc.

X-32VM is the successor to the highly acclaimed "DOSX" 32-bit extender shipped with the Zortech C/C++. It now supports both Watcom and Zortech 32-bit compilers and includes a virtual memory option. It is supplied with a manual with complete documentation and example code. It is compatible with VCPI, DPML, and XMS. An optional source level debugger, FlashView, is also available. NO ROYALTIES.

List: \$69 Ours: \$62
FAXcetera #: 1002-9201 Return: F



EDITORS

BRIEF 3.1

Borland International

The best-selling editor for PC programmers features mouse support, EMS caching, redo and undo. Program faster and more productively with multiple windows, built-in support for 42 compilers, template editing, smart indenting, complete search/replace, total keyboard configurability, editable keystroke macros, C-like macro language with source-level debugger and more.

List: \$249 Ours: \$95
FAXcetera #: 1271-0001 Return: F

Cheetah 2.2

Software Science, Inc.

Full-featured programmer's editor to write, compile, link, and run applications from within the editor via hotkeys or a pulldown menu. Up to 500 files can be edited in windowed or full screen mode; complete editing features: block operations, keyboard macros, macro editor, source formatting, and printer support (background printing!). Language support for dBASE, Foxbase, Clipper QuickSilver, and Force. Errors detected by the compiler are highlighted in the source code. dBASE files can be created, browsed, and indexed internally in CHEETAH. Complete with mail-merge facility, pop-up calculator, ASCII chart, spell-checking, etc. Keyboard layout and color scheme are 100% configurable.

List: \$145 Ours: \$131
FAXcetera #: 1804-0003 Return: F

ED, The Programmer's Editor, for DOS 7.0

Lifeboat Software

Designed for professional and new users alike, ED, The Programmer's Editor, for DOS incorporates the best features found in other leading programmer's editors and much more. Key features include: built-in code support for C++, dBASE, Clipper, and Pascal; automatic code indenting and completion; unlimited undo and redo; keyboard macros and remapping; complete context-sensitive help; and simulation of popular editors (Brief, Wordstar, Qedit, Norton). Power users will appreciate the fast C extension language, LAN file locking, regular expression search, full support for rectangular Column blocks, and built-in compiler support with error tracking.

List: \$199 Ours: \$159
FAXcetera #: 0233-0011 Return: F

EDIX 8.0

Emerging Technology Consultants, Inc.

EDIX is a multiple-window, full-screen text editor. EDIX is available for DOS, OS/2, UNIX and VMS systems. The features which set EDIX apart from the rest include its uniform interface across machines and operating systems, sub-process execution with automatic output capture, compiler support, keystroke record and playback, a versatile search and translate capability, plus nearly unlimited potential for customization.

List: \$195 Ours: \$176
FAXcetera #: 1567-0001 Return: N

Evolve

American Cybernetics

Evolve is a wrap-around environment for Multi-Edit that understands a number of XBASE dialects including Clipper, FoxPro, dBASE and ARAGO. Features include: Enhanced Auto-Template Expansion and Smart indenting; Function writer; Code formatter; Function/Object Locator and Browser; View database structures, and instantly create comment blocks from them; Rmake interface; Auto-Brace matching and closure; Operator alignment; Block commenting and un-commenting; Source code Report Writer; Full on-line help; and more. Requires Multi-Edit 5.0 or later.

1 Dialect add-on List: \$79 Ours: \$72
All Dialects add-on List: \$129 Ours: \$115
1 w/Multi-Edit Std. List: \$179 Ours: \$159
w/Multi-Edit Pro. List: \$249 Ours: \$224
All w/Multi-Edit Std List: \$229 Ours: \$205
w/Multi-Edit Pro. List: \$299 Ours: \$255
FAXcetera #: 1846-0004 Return: F

Guide to C++

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Guide to C++ is a complete, on-line, hypertext reference manual for Turbo C++. Integrates directly into the Multi-Edit hypertext system, or runs standalone with our TSR viewer. Context sensitivity allows you to pop-up help on the key word your cursor is on. Cut and Paste from the guides directly into your source! Also available in Norton Guides format. Multi-Edit or Norton Guides format:

List: \$40 Ours: \$35
Both formats: List: \$60 Ours: \$55
FAXcetera #: 1846-0003 Return: F

Guide to Pascal

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Guide to Pascal is a complete, on-line, hypertext reference manual for Turbo Pascal 6.0. Integrates directly into the Multi-Edit hypertext system, or runs standalone with our TSR viewer. Context sensitivity allows you to pop-up help on the key word your cursor is on. Cut and Paste from the guides directly into your source! Also available in Norton Guides format. Multi-Edit or Norton Guides format:

List: \$20 Ours: \$20
Both formats: List: \$30 Ours: \$30
FAXcetera #: 1846-0008 Return: F

Hyper-Word 2.01

Zaron Software

Multi-window Hypertext word processor and development system. Instantly create interactive tutorials and reference systems. Includes context sensitive help, multi-level undo, pulldown menus. For the programmer; create program mock-ups, automatically display subroutine from any reference, interrelate all program source files. Full WYSIWYG word processing features. Mouse support.

List: \$149 Ours: \$135
FAXcetera #: 2868-0001 Return: F

KEDIT 4.0

Mansfield Software Group, Inc.

Powerful general purpose text editor compatible with XEDIT, IBM's VM/CMS text editor, also contains many PC-based editor features. Supports multiple files, multiple windows, block operations, sophisticated string search and change, DOS interface, macro language is either built-in subset of REXX or full REXX with Quercus Systems' Personal REXX or IBM's OS/2 REXX.

List: \$180 Ours: \$129
FAXcetera #: 1518-0001 Return: F

SEE PAGE 176

FOR FAXcetera®
INSTRUCTIONS

DOS DEVELOPMENT SOFTWARE

MKS VI 3.1

Mortice Kern Systems

Provides a complete implementation of the powerful UNIX System V full screen editor for use of your DOS system. Handles files of any size (limited only by available disk space) and performs fast screen updates. Allows you to use international character sets (such as German, French and Spanish) and create/edit text in many languages. Includes complete pattern matching for searching and substitution; complete undo; English-like syntax in command mode; mnemonic control sequences in visual mode; operations may be applied to characters, words, lines, sentences, paragraphs or the entire file; full macro capability; and c-tags for cross referencing of C programs. List: \$149 Ours: \$125 FAXcetera #: 1634-0006 Return: F

Multi-Edit Lite 1.0

American Cybernetics, Inc.

Multi-Edit Lite is a scaled down version of Multi-Edit Standard. Developed for environments where disk space may be a problem, (like your laptop), Multi-Edit Lite retains the same Keystroke Macro capabilities, mouse support, menus, multiple windows, dialog boxes and easy configuration as Multi-Edit Standard and Pro. Edit 25 files at a time; full Virtual Memory, (edit any size file); EMS/XMS support; compile within editor (swaps out to 2.5K); auto-error location for most compilers; loads FAST! List: \$79 Ours: \$69 FAXcetera #: 1846-0005 Return: F

Multi-Edit Professional 6.0

American Cybernetics, Inc.

Extended version of Multi-Edit Standard includes: Document Module containing Spellchecker (80K words, 2 auxiliary user dictionaries) & Print Formatter for advanced print functions; Communications Module provides for multiple ports & modem control; Source Code Module allows customization for all user interface & advanced feature macros plus source-level macro debugger & support for popular version control software packages; all seamlessly integrated. List: \$199 Ours: \$139 FAXcetera #: 1846-0001 Return: F

Multi-Edit Standard 6.0

American Cybernetics, Inc.

Fully configurable, intuitive ASCII text editor provides complete programming environment; reconfigure/compile within editor; powerful CMAC 'C-Like' macro language (MEMAC still supported); window edit up to 100 files (unlimited size); Binary & Unix file editing; SAA or 'Classic' interface style; USER MENU integrates all your tools; Real-time DOS output window; EMS/XMS support; unlimited keystroke macros; seamless mouse support; multi-directory DOS Shell; context-sensitive Hypertext help; cross-directory search; regular expression Search/Replace; extensive language support; undo up to 65K operations/full REDO; MORE! Free Demo. List: \$129 Ours: \$116 FAXcetera #: 1846-0002 Return: F

Multi-Tags 1.0

American Cybernetics, Inc.

Multi-Tags is a hypertext-style source code locator and browser for Multi-Edit. This add-on scans your source code and builds databases of functions, structures, types and objects (depending on language). While editing source code, you can place your cursor on any function name (or other supported language structure) and Multi-Tags will instantly locate the source file and position where the tag was defined. Features include: Tag Database Browser that lets you view, navigate through, and maintain your databases; Menu or Hot-Key driven (configurable); Batch operation, scans only files that have changed since the last scan; supports multiple tag databases; Databases may be separated by language or project, or both; currently supports C/C++, CMAC, Turbo-Pascal, ASM, Paradox, Quick-Pascal, Modula-2, dBASE, Clipper, and FoxBASE, more to come. Macro source code included. Requires Multi-Edit. List: \$30 Ours: \$25 FAXcetera #: 1846-0006 Return: F

The Norton Editor 2.0

Symantec

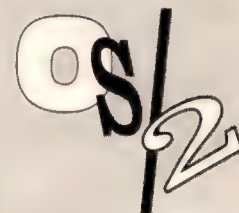
An inexpensive, full screen editor designed for creating and modifying ASCII files. Requires only 130K of memory but can edit files of any size. Second editor operates with just 50K of memory. This two-editor package offers a unique combination of power and flexibility for all user levels. List: \$99 Ours: \$74 FAXcetera #: 2132-0010 Return: F

SlickEdit 2.2

MicroEdge Inc.

Programmable editor including undo/redo, multiple windows, and multiple files up to 1 GB. Simultaneously edit Mac, UNIX, and DOS ASCII format files. Includes 450K of on-line help, multiple clipboards, compiler error message processing, procedure tagging, a typeless REXX-style macro language, a programmable file manager, and command retrieval as well as robust emulation for Brief and Epsilon (not just key reassignments.) Available for DOS, OS/2, MS Windows NT, SUN Sparc 4, SCO UNIX 386 and XENIX 386. All 5000 lines of macro source code are completely compatible across all platforms, and SLICK macros can be transferred between these platforms. List: \$195 Ours: \$149 FAXcetera #: 1997-0001 Return: F

Special Offers



See pages 39-41!

See pages 37 & 38 and 44-46 for informative articles on OS/2 2.0 as a platform for developing.

Take a Closer Look at

Multi-Edit

Multi-Edit will convert programmers' editing tools and easy configuration will surpass user expectations. *Nicholas Farnley, Info World, July 6, 1992*

Multi-Edit Standard \$129

- Edit up to 128 DOS, UNIX or BINARY FILES of unlimited size!
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- Cross directory, Multi-File search and replace!
- Unlimited UNDO and REDO!
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- Auto-save and auto-backup
- Smart indenting, syntax highlighting, construct matching and template expansion for ASM, BASIC, C, C++, COBOL, Fortran, Modula-2, Pascal, XBase and more!
- Supports more than 60 different compilers!
- Unlimited keystroke macros!
- Condensed display model
- Context-sensitive Hypertext help
- Multi-Directory file manager
- C-Like macro language!
- Much More!

Multi-Edit Professional \$199

Advanced document formatter; spellchecker; communications; macro debugger; system macros source code; VCS support.

Multi-Edit is not just an editor, but a complete development environment! The flexible compiler/linker/make interface and user-definable menus let you interface ALL OF YOUR TOOLS into one, seamless work place!

Multi-Edit's easy customization, intuitive user interface, language universality, mouse support, macro language and sheer power combine to provide you with unparalleled productivity. You will find freedom and flexibility that you just do not get from IDEs or other programmer's editors.

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"Almost every aspect of the editor shows a deep understanding of programming needs. This meticulous design and intuitive construction make Multi-Edit just about the finest text editor not only in DOS but on just any platform."
—Andrew Eisenack, Computer Language, July 1992

SPF/PC

Command Technology Corporation
Functionally equivalent to the text editing capabilities of ISPF/PDF on the IBM mainframe with true split screen; directory/member lists; on-line, context-sensitive HELP; command stacking; and HEX display for both BROWSE and EDIT. Additional features include instantaneous response time, 43-line-EGA/50-line VGA support, cursor scrolling, LAN compatibility, binary file editing, large file support, and access to 48 PF keys.

List: \$295 Ours: \$266
FAXcetera #: 1533-0001 Return: L

SPF/2

Command Technology Corporation
Functionally equivalent to the text editing capabilities of ISPF/PDF on the IBM mainframe. Features 3270 compatibility, macro interface to OS/2's REXX, ASCII or EBCDIC file editing, program comment highlighting, multi-directory file section lists with text searching capabilities, large file editing and CUT and PASTE using PM clipboard (OS/2 only).

List: \$295 Ours: \$266
FAXcetera #: 1533-0002 Return: L



VEDIT/VEDIT PLUS 2.04/3.50

Greenview Data, Inc.
Offers exceptional speed, small size (70K) and intuitive operation. Fully integrates compilers, assemblers, debuggers and MAKE tools. Automatically tracks syntax errors. Edit multiple files of unlimited size. Features include windows, pulldown menus, mouse support, Undo, configurable keyboard, search/replace with regular expressions, automatic indent and parentheses matching. Also word processing features and column operations. VEDIT PLUS adds macro programming.

VEDIT List: \$ 69 Ours: \$ 62
VEDIT PLUS List: \$185 Ours: \$119
FAXcetera #: 1020-0001 Return: F

Wylbur/AT 1.4

Adlersparre & Associates Inc.
A complete reproduction of the IBM mainframe version of WYLBUR. It provides the same edit environment for the MVS programmer, and provides all the text editing, and EXEC command language capabilities, as well as many enhancements. Many EXEC programs can be ported from the mainframe to the PC with little or no change. In addition, new features provide serial communication for automated script files, direct program execution under DOS, data entry panels, and indexed data base creation. Users who know WYLBUR on the mainframe already know Wylbur/AT.

List: \$199 Ours: \$179
FAXcetera #: 3253-0001 Return: F

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Instructions.

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EMBEDDED SYSTEMS

386/ASM/LinkLoc 4.0

Phar Lap Software
A complete 80x86 embedded development package. It has the components needed to build embedded systems: 386/ASM, a full-featured MASM compatible macro assembler; LinkLoc, a one-step linker/locator; and 386/IDOS-Extender, a protected mode runtime environment which allows you to prototype and debug your software on a 386 PC. Also includes a full-featured librarian, tested for compatibility with many compilers and assemblers, including those from MS, MetaWare, Intel, Green Hills, Alslys and Telesoft.

List: \$1295 Ours: \$1166
FAXcetera #: 1490-0008 Return: F

Cross-16 Meta-Assembler V2.0

Universal Cross-Assemblers
A table based absolute cross-assembler using the manufacturer's mnemonics. Produces a listing and Intel, Motorola or binary hex file from an assembly language source file. Supports ALL of the processor families included in XDASM plus: 37700, 50740, ADSP-2100, NEC7500, PIC16C5x, TMS3201x, TMS370, TMS7000 and TMS9900. User configurable for other processors.

List: \$99 Ours: \$79
FAXcetera #: 2538-0002 Return: F

Cross-32 Macro Meta-Assembler V2.0

Universal Cross-Assemblers
An enhanced version of Cross-16 with macro and conditional assembly. Supports ALL of the processor families included in XDASM and Cross-16 plus: 68HC16, 68000, 80186, 80C196, ADSP-2100, H8/300, H8/500, TMS3202x, TMS34010, Z280, Z8002 and more. User configurable for other processors.

List: \$199 Ours: \$159
FAXcetera #: 2538-0001 Return: F

Link&Locate 386 1.0

Systems & Software, Inc.
Supports building protected-mode programs for 286/386/486 embedded systems and 386/486 DOS-extender applications. Accepts object modules from MetaWare High C, MS C 6.0, and MS Macro Assembler. The linker generates executable files in OMF-286/386 boot-loadable format for downloading to source-level debuggers, in-circuit emulators, and PROM programmers. Includes SoftProbe 386/SIM, a 386/387 instruction-level simulator and source-level debugger.

List: \$795 Ours: \$716
FAXcetera #: 1665-0006 Return: F

Link&Locate++ Extended 6.0

Systems & Software, Inc.
Supports the development of large real-mode embedded systems applications with MS C and MASM 5.1 or 6.0. It generates executable code in Intel OMF-86 and absolute code in pure binary, Intel hex, or Tektronix extended hex format. Full flexibility and control of segment and group placement anywhere in physical memory. Includes start-up source code, floating-point support, & working examples.

List: \$479 Ours: \$431
FAXcetera #: 1665-0002 Return: F

Link&Locate++ for Borland 1.0

Systems & Software, Inc.
Links and builds real-mode embedded systems applications with Borland languages. It accepts object files from Borland, Pascal, C, C++, and Turbo Assembler. Generates executable code in Intel OMF-86 and absolute code in Intel hex and pure binary for PROM programming. Full flexibility and control of segment and group placement anywhere in physical memory. Includes object code librarian, code converter, start-up source, floating-point support, & working examples.

List: \$479 Ours: \$431
FAXcetera #: 1665-0001 Return: F

LinkLoc 4.0

Phar Lap Software
An embedded systems linker/locator for the Intel 8086/80286/80386 family of microprocessors. Designed to link software written in assembly or high-level languages such as C and Pascal, it produces executable image files which can be down-loaded to a variety of targets including in-circuit emulators, ROM-based debuggers, and PROM programmers. Available with or without Phar Lap 386/ASM on a variety of host computer systems, including the IBM PC, Sun and Apollo UNIX workstations, and the DEC VAX and Micro VAX systems.

List: \$795 Ours: \$715
FAXcetera #: 1490-0011 Return: F

SoftProbe 386/SIM 1.2

Systems & Software, Inc.
An instruction-level simulator and source-level debugger for 386/486 embedded systems development. Start debugging your 386/486 applications before your prototype hardware is available: Provides simulation for the 386 CPU (real/protected mode), 387 math coprocessor, timer, two interrupt controllers, I/O ports, & up to 4 GB physical memory. Debugs at source and assembly level using breakpoints, watchpoints, trace, profiling, and path coverage. Accepts OMF-86/286/386 formats.

List: \$595 Ours: \$536
FAXcetera #: 1665-0007 Return: F

SoftProbe 386/TX 1.0

Systems & Software, Inc.
A source-level remote target debugger for 386/486 embedded systems applications. Accepts executable files in OMF-86/286/386 boot-loadable formats and allows downloading programs from the host PC and debugging on the actual target system. Includes source code for the reconfigurable modules of the target monitor. The debugger has a multi-window user interface and concurrently displays registers, source, command dialog, and many more.

List: \$995 Ours: \$896
FAXcetera #: 1665-0005 Return: F

XDASM Cross-Disassembler 2.1

Universal Cross-Assemblers
Produces assembler ready source code for Cross-16/32 from an Intel, Motorola or binary hex file. Supports ALL of the: 180X, 3201X, 3870, 4004, 64180, 6502, 6800, 6805, 6809, 68HC11, 78C10, 8048, 8051, 8085, 8096, 89700, COP400, COP800, SUPER8, Z8, and Z80 processor families. User configurable for other 8-bit processors.

List: \$249 Ours: \$224
FAXcetera #: 2538-0003 Return: F

For return policy details, turn to page 75.

EXPERT SYSTEMS

Auto-Intelligence 2.0 IntelligenceWare, Inc.

Discover the decision making criteria used in your field by identifying rules based on your own weighting of attributes. Intelligent interviews make the process of capturing knowledge in structured decision-making areas systematic. Examples of such task include diagnosis, financial investments, loan approval, and risk analysis.

List: \$490 Ours: \$441
FAXcetera #: 1798-0006 Return: L

BestChoice3 3.0 Sterling Castle

Assists you or your team in any problem requiring alternative analysis. Useful for determining program design specification, features to incorporate, product evaluations, purchase considerations (equipment, property, stocks), personnel review, etc. Logical process, simple to learn and easy to use.

List: \$99 Ours: \$89
FAXcetera #: 1635-0006 Return: O
90 day money back guarantee

BrainMaker 2.5 California Scientific Software

BrainMaker finds hidden patterns in your data without using rules, learns by example, and makes forecasts from any kind of data. Complete neural network development system includes NetMaker data manager, tutorial and 8 sample networks. Imports Excel, Lotus, dBASE, ASCII & binary files. Up to 512 neurons per layer, up to 6 hidden layers. Runs on any PC or Mac. Includes User Guide and bonus text "Introduction to Neural Networks and Expert Systems". Specify PC or Mac. Easy upgrade to BrainMaker Pro.

List: \$195 Ours: \$175
FAXcetera #: 2163-0001 Return: F

BrainMaker Professional 2.5 California Scientific Software

Fully-featured professional version of BrainMaker (see above) includes full suite of automatic and semi-automatic development tools for network optimization. Supports over 25,000 independent variables, graphics output, high-speed Binary and Hypersonic training. Includes runtime license and source code sufficient to run trained neural network on any platform. Optional accelerator system means networks that once needed weeks now train in hours—3x CRAY-1 speed on your PC!

List: \$795 Ours: \$675
FAXcetera #: 2163-0002 Return: F

Expert Measure IntelligenceWare, Inc.

Evaluate the quality of your knowledge-base with a set of test cases in an interactive environment that allows the user to adjust the criteria used for judgement. Expert/Measure combines cost and frequency matrices to measure the level of "confusion" inherent in a decision support system avoiding costly "logical" errors.

List: \$490 Ours: \$441
FAXcetera #: 1798-0007 Return: L

Intelligence/Compiler 3.0 IntelligenceWare, Inc.

Develop multi-paradigm applications fast through a fully integrated, intelligent programming environment. Combine object orientation, user definable Dynamic Hypertext windows, rule-based programming, database management, and automatic interface generation to increase your productivity and make your applications fly fast.

List: \$490 Ours: \$446
FAXcetera #: 1798-0008 Return: L

KnowledgeMaker 1.0 Knowledge Garden Inc.

A powerful induction system which reads examples in text or LOTUS 1-2-3 files and creates rules. Output can be in English or the precise syntax required by KnowledgePro, Micro-Expert, insight 2+, M.I. or the system's own inference engine written in Borland's Turbo Prolog.

KnowledgeMaker was written in KnowledgePro, and is supplied with source code. KnowledgeMaker is both an expert system about creating rules from data and a tool with which to do it.

List: \$199 Ours: \$179
FAXcetera #: 1474-0004 Return: F

KnowledgePro 1.44 Knowledge Garden Inc.

A high-level language for building applications in DOS. It lets experts, authors and writers create tutorials and explain complex procedures or regulations using a unique combination of object-oriented programming, expert systems and hypertext techniques. Underlying this simple-to-use environment is a powerful symbolic language and an entirely new programming paradigm called the topic. Topics are "chunks of knowledge" containing rules, calculations, command hypertext or graphics. KnowledgePro can read external files, call external programs and access routines written in other languages.

List: \$495 Ours: \$449
FAXcetera #: 1474-0005 Return: F

Logic Gem 1.8 Sterling Castle

A decision table based logic processor and program code generator for programmers in C, BASIC, Pascal, FORTRAN, COBOL and dBASE. It eliminates coding errors and avoids hours of debugging time. It documents the logic assuring good communications between designer and coder plus reminds the programmer of the logic from one work session to the next.

List: \$149 Ours: \$134
FAXcetera #: 1635-0008 Return: O
90 day money back guarantee

FOREIGN LANGUAGE TRANSLATION

GTS-BASIC Globalink, Inc.

This is the best PC-based Foreign Language Translation. GTS-BASIC gives true translations on sentences or blocks of text with up to 90% accuracy! You can modify or add to the general dictionary of over 60,000 terms. The products handle idiomatic expressions and multiple translations of a word based on parts of speech. GTS-BASIC products available are: Spanish to/from English, French to/from English, German to/from English and Russian to/from English.

List: \$495 Ours: \$420
FAXcetera #: 3583-0001 Return: N



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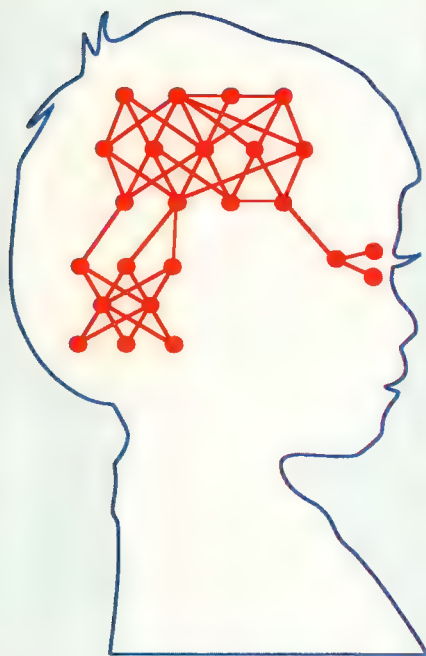
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GTS products run on IBM PCs and compatible computers, 12 MB hard disk, 840K RAM and DOS 3.1 or higher.
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PC Magazine**

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Intelligent applications are the future of programming. BrainMaker makes it easy for you to create smart applications today.

BrainMaker models highly non-linear processes and learns from the past. BrainMaker builds your model automatically from examples you provide. BrainMaker reveals hidden patterns in any kind of data with no assumptions about form, no use of rules and no programming required.

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BrainMaker Professional includes runtime license and source code sufficient to run trained neural network on any platform. Runs on any PC-compatible, supports very large networks (over 25,000 independent variables!), includes graphics support and Data Correlator to show correlations and optimum lag times. With optional accelerator board system, networks will run at up to 41.3 million connections per second on your PC, three times faster than a CRAY-1 supercomputer at 1/1000th the cost! BrainMaker Professional is \$795, optional accelerator board system is \$9,750.

To order BrainMaker: call Programmer's Paradise 800-445-7899. To order BrainMaker literature: call *FAXcetera* 908-389-8173 code 2163-0001. For BrainMaker Application Hotline: 800-284-8112. 30-day unconditional guarantee.

California Scientific Software

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FORMS

E-Mail/C DOS 5-use/cc:Mail JetForm Corporation

Enables users to send and retrieve complex forms, designed with JetForm Design, and the data they contain throughout the enterprise. Include data entry fields, calculations based on the value of other fields, specific routing info, and security.

List: \$ 495 Ours: \$ 420
20-user version List: \$1495 Ours: \$1269
FAXcetera #: 0020-5201 Return: O
60 day money back guarantee.

Filler/C for DOS/Character JetForm Corporation

Enables users to fill forms created with design, gather data, and transmit it visually, on-screen data entry facility, full data validation, complete calculations, database query, read & write.

List: \$ 129 Ours: \$ 115
5-user version List: \$ 495 Ours: \$ 445
20-user version List: \$1495 Ours: \$1349
FAXcetera #: 0020-5202 Return: O
60 day money back guarantee.

Merge-DOS JetForm Corporation

Enables you to merge variable data from files created by any PC program with forms generated using Design. Since merge is invoked at DOS command line, its execution can be transparent to the end-user.

List: \$ 199 Ours: \$ 169
5-user version List: \$ 795 Ours: \$ 719
20-user version List: \$2395 Ours: \$2149
FAXcetera #: 0020-5203 Return: O
60 day money back guarantee.

Server for DOS LANS JetForm Corporation

Prints forms designed with JetForm Design in multi-user & network applications. Merge variable length data, any client LAN, including JetForm Filler can request forms and data merge services, one request can print multiple forms on multiple printers. 20-user included.

List: \$1195 Ours: \$1015
Unlimited Users List: \$2495 Ours: \$2225
FAXcetera #: 0020-5204 Return: O
60 day money back guarantee.



FORTRAN LANGUAGE

COMPILERS

Lahey F77L 5.0

Lahey Computer Systems
F77L is the only real mode compiler available that lets you take advantage of your 80386 PC by generating 32-bit instructions. Version 5.0 is a complete programming environment with an Editor, Profiler, Linker, Debugger and Make Utility. For porting mainframe code or development, F77L has many professional features: full ANSI77 compatibility, fast compilation, Microsoft and Borland C interfaces, excellent diagnostics, and popular mainframe features. New Fortran 90 features include: Allocatable arrays, CASE constructs, CYCLE and EXIT, Block Names, and many others.

List: \$595 Ours: \$535
FAXcetera #: 1476-0001 Return: F

Lahey Personal Fortran 77 3.0 Lahey Computer Systems

For programmers who want a powerful compiler but don't need to write programs larger than 64K. Includes full ANSI 77 Standard support, fast compilation to reduce development time, editor, Source On-Line Debugger (SOLD), Linker, Library Manager, helpful diagnostics and warning messages. It also includes math coprocessor support and emulation. The new 400-page manual highlights all FORTRAN 77 extensions. The Optional Toolkit includes productivity aids such as break handling, system subroutines, I/O, random number generator, and video graphics.

List: \$99 Ours: \$89
FAXcetera #: 1476-0002 Return: F

LPI-FORTRAN 3.4

Liant Software Corporation
A full implementation of the ANSI FORTRAN X3.9-1978 (FORTRAN-77), and is compliant with the X/Open, MIL-STD-1753, IBM System Application Architecture (SAA), and FIPS Pub 69-1 standards. A high-performance compiler that allows you to select various levels of optimization to further increase the execution speed of your program.

Supports cross-language calling, offers extended data types, including REAL*4, REAL*8, INTEGER*1, INTEGER*2, INTEGER*4, DOUBLE COMPLEX, DOUBLE PRECISION, COMPLEX*8, COMPLEX*16, LOGICAL*1, LOGICAL*2, and LOGICAL*4, and supports the following floating-point coprocessors: Weitek 1167, 3167, & 4167, plus Intel 80287 and 80387. Available on i386/i Sun Sparc, and 88000-based systems.
List: \$1295 Ours: \$1166
FAXcetera #: 1952-0004 Return: L

Microsoft FORTRAN Optimizing Compiler 5.0

Microsoft Corp
Create the fastest, most compact, and portable programs available from any FORTRAN development environment—whether on a personal computer, mini-computer, or mainframe. FORTRAN 5.0 includes new VAX extensions plus 100% IBM SAA compatibility. While a GSA-certified Full, ANSI 77 product, it also provides selected ANSI 8X FORTRAN extensions. Linking MS FORTRAN programs with routines written in other MS languages. MS's CodeView source-level debugger, the programmable MS Editor, & incremental linker provided with MS FORTRAN team up to provide a most productive & powerful development environment.

List: \$495 Ours: \$349
FAXcetera #: 1269-0003 Return: L

RM/FORTRAN

Liant Corp.
A full implementation of ANSI Standard FORTRAN X3.9-1978 (FORTRAN-77) with no errors. Contains key mainframe extensions from VAX, VS, FORTRAN-66 and supports arrays larger than 64KB. Powerful memory resource management allows multiple program units to share the same memory. Highly optimized code is generated for fast execution. Also includes a full-screen editor, an interactive symbolic debugger, a linker, library routines and utilities, a newly enhanced 8087/80287/80387 emulator to support IEEE floating point arithmetic, and RM/Forte—which integrates tools in a development environment to speed and simplify programming. RM/FORTRAN is available under MS-DOS and OS/2, and runs on the 80286 and 80386 processors.
List: \$595 Ours: \$499
FAXcetera #: 1952-0005 Return: L

WATCOM FORTRAN 77 9.0 WATCOM

A complete professional FORTRAN 77 development system for both DOS & OS/2. Based on the same technology as WATCOM C, F77 uses sophisticated register allocation and extensive code generator optimizations to produce fast, tight 16-bit 80x86 code. Offers protected-mode version of the compiler, full ANSI FORTRAN 77 language support plus extensions, SAA compatibility, GKS graphics library, full-screen source-level debugger, debugging of overlays, remote debugging capability, execution profiler and runtime compatibility with WATCOM C.

List: \$495 Ours: \$439
FAXcetera #: 1683-0004 Return: F

WATFOR-77 3.1 WATCOM

Streamlines FORTRAN 77 program development by completely integrating the compiler, editor, and debugger. Compile time is optimized by compiling the source code directly into memory, automatically linking and executing immediately. The interactive debugger provides a complete set of problem-solving aids to quickly pin-point problem areas. The integrated editor allows a program to be edited, compiled, and executed directly without leaving the WATFOR-77 environment. Supports full ANSI FORTRAN X2.9-1978 language as well as a significant number of enhancements. The IBM PC version also includes WATCOM GKS Graphics, a library of ANSI standard (level 0a) routines to create graphical images on a variety of output devices. Runs compatibly on IBM PC, IBM mainframes, and Digital VAXs.
List: \$375 Ours: \$338
FAXcetera #: 1683-0009 Return: F

GRAPHICS

GEOGRAF Professional 4.0 GEOCOMP Corporation

Allows mainframe graphing power to be added to PC programs. It provides simple CALCOMP compatible commands that help create report quality plots and graphs from inside PC programs. Supports 13 character fonts, 4 plot line types, an area fill routine, and rotate and re-scale commands. Device independence supports over 250 different output devices. Supports FORTRAN compilers.
List: \$325 Ours: \$293
FAXcetera #: 2219-0001 Return: F

GrafPRINT for Graphoria 2.0 AnSoft, Inc.

GrafPRINT for Graphoria supplements the Lahey Graphoria Graphics package by providing high resolution outputs on most Dot Matrix, LaserJet, InkJet, and PaintJet printer. Print utility allows for complete control of the printer. GrafPRINT now includes GrafFONTS, a library for generating graphics text on screen and printer. GrafFONTS includes 7 vector font sets with functions for scaling, spacing, italicizing, mirroring, orientation, justification, text color and bolding. NO ROYALTIES!

List: \$295 Ours: \$265
FAXcetera #: 3098-0002 Return: L

Graphoria Lahey Computer Products

Graphoria, the new Lahey graphics library, is a compatible superset of the video graphics routine included with Lahey Fortran Language Systems. In addition to its own mouse and keyboard routines, Graphoria has routines that are functionally identical to the CalComp plotting routines.

(F77L or LP77) List: \$250 Ours: \$225
(F77L-EM/32) List: \$350 Ours: \$315
FAXcetera #: 1476-0005 Return: L

ADDITIONAL PRODUCTS

FOR STRUCT 2.0

Cobalt Blue
Transforms spaghetti FORTRAN into fully structured code. GOTO and IF-GOTOs are replaced with IF-THEN-ELSE, DO-WHILE and DO-ENDDOs. Original logic is retained, code is not duplicated and dead code can be removed. Structures to F-77, VAX F-77 or to VAX F-77 with FORTRAN-90 control statements. Now includes test coverage analysis, for finding hidden bugs.
List: \$825 Ours: \$743
FAXcetera #: 2114-0001 Return: O
Limited 15 day warranty. Do not break disk seal.

FORTLIB 6.0

Sutrasoft
FORTLIB comes with complete source code and has functions to handle keyboard, video, RS-232, disk drives, directories, files, system time and date, strings, memory allocation, data conversion, data sorting, system service, printer service character classification etc. Most of the functions are similar in function to the C language standard library. The code is compact and fast as almost all routines are written in assembly language.
List: \$250 Ours: \$225
FAXcetera #: 1720-0001 Return: L

PRO STRUCT 1.2 Cobalt Blue, Inc.

Utility to unscramble and restructure old FORTRAN to F-77 or VAX FORTRAN. Converts IF-GOTO and GOTO statements to IF-THEN-ELSE and DO-WHILE constructs, and DO...CONTINUE to DO...ENDDO Statements. Structures up to 500 lines per routine with no file size limit.
List: \$275 Ours: \$248
FAXcetera #: 2114-0003 Return: O
Limited 15 day warranty. Do not break disk seal.

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GRAPHICS

Data Entry 1.6A Island Systems

A specialized library and CASE tool for creation of data entry menus. Features data validation and companion CASE tool for creation of form menus. Features data conversion, real-time data checks, dBASE like "picture strings", immutable characters, movement between fields, exit conditions from ANY field, context sensitive help, range checking, short cut keys, multiple title lines. Includes the Data Entry Designer that provides an on-screen WYSIWYG environment for creating form menus with automatic code generation. Source is available.

List: \$ 99 Ours: \$ 89
w/source List: \$224 Ours: \$199
FAXcetera #: 2088-0001 Return: L

Fastgraph 2.1

Ted Gruber Software

Fastgraph is a comprehensive, high-performance graphics library, well suited to writing games, educational software, scientific and business applications, and home entertainment products on DOS-based systems. It is fast, powerful, and easy to use. The library includes over 170 functions, ranging from simple pixel display to sophisticated animation tools. Fastgraph supports 22 video modes and works with most popular C/C++, BASIC, Pascal, and FORTRAN compilers. No royalties. Evaluation Kit available.

List: \$169 Ours: \$152
FAXcetera #: 2219-0002 Return: F

Figaro + 3.0

Liant Software Corporation

Figaro+ is an enhanced implementation of the ANSI/ISO programmer's hierarchical interactive graphics system (PHIGS). Standard for the C and FORTRAN programmer. It provides standard PHIGS functionality for those applications requiring dynamic and interactive modeling, viewing, modification, and rendering of 2D and 3D objects. Figaro_ is PHIGS+ and provides lighting and shading capabilities required for generating realistic models. Contains many extensions required for building high performance graphics applications. Models with 16 or 256 colors. Requires DOS 4.01 or higher, WATCOM C/386 8.5 or WATCOM FORTRAN/386 8.5 (should also work with C/386 9.0), Phar Lap/386 DOS-Extender 4.0.

List: \$995 Ours: \$749
FAXcetera #: 1952-0018 Return: F

Flash Graphics

FlashTek Inc

Flash Graphics, for Borland, Zortech, Microsoft, and other C/C++ compilers, supplies a debug library, which catches many errors immediately, and a standard library for maximum speed and minimum code. Multiple fonts, 8-bit virtual screens, and ability to put simultaneous graphics on multiple screens are provided. A special module (source code included) acts as an interface between applications written for BGI and Flash Graphics. No Royalties.

List: \$250 Ours: \$215
FAXcetera #: 1002-9201 Return: F

GRAF/DRIVE PLUS DTP Driver Disk 3.0

Fleming Software

Additional drivers for GRAF/DRIVE PLUS to support Desktop Publishing graphics files and color dot matrix printers. Creates graphic files in the following formats: PCX, TIFF (compressed & un-compressed), GEM IMG, Windows 3 BMP, CGM, AutoCad DXF, Word Perfect WPG, VideoShow (ANSI NAPLPS). Also includes drivers for Epson 9 and 24-pin color printers. Requires GRAF/DRIVE PLUS Developer's License.

List: \$149 Ours: \$134
FAXcetera #: 1720-0002 Return: L

GRAF/DRIVE PLUS Developer 3.0 Fleming Software

GRAF/DRIVE PLUS provides device-independent, BGI-compatible graphics drivers for: LaserJet, DeskJet, DeskJet 500-C; PaintJet, Epson/IBM 9-pin and 24-pin dot matrix printers; PostScript; and HPGL plotters. Screen graphics can often be "ported" to a printer by simply installing a printer driver. Output is at device resolution. Supports PostScript and LaserJet fonts. Color is supported for DeskJet 500C, PaintJet, PostScript, and plotters. You can print directly to a serial or parallel printer, or output to a file for later printing. Supports Turbo Pascal 5.0/5.5/6.0, Turbo C 2.0, Turbo C++, Borland C++ 2.0/3.0. No royalties.

List: \$299 Ours: \$269
FAXcetera #: 2872-0001 Return: F

GRAFLIB 5.0

Sutrasoft

GRAFLIB currently supports CGA, EGA, VGA, Hercules Graphics cards, EPSON, HP LaserJet, Postscript compatible printers. GRAFLIB contains routines to draw arcs, circles, ellipses, polygons, linear, log, polar, smith, bar and pie charts. Line types, fill colors, hatch styles, text orientation, direction, axes, tick marks, linear and logarithmic grid drawing. The library comes with full source code and a comprehensive manual. GRAFLIB is available for C, FORTRAN, BASIC and PASCAL.

List: \$250 Ours: \$225
FAXcetera #: 1720-0002 Return: L

graphics-MENU

Island Systems

The graphics-MENU GUI toolkit is a set of libraries (for C and Pascal), utilities and CASE tools that provides the developer of graphics applications with the tools to rapidly integrate a production quality interface into any application. Includes icons, windows, horizontal and pulldown menus, sub-menus nested to any level, scrollable checklist, buttons, Data Entry form menus, text editor window, pop-up messages, prompt boxes, and more. Features: EMS support, beveled or shadowed borders, full keyboard and mouse support. Comes with extensive Designer. CASE tools provide WYSIWYG design environments for creating horizontal, pulldown and form menus with automatic generation of complete, commented code in the target language. Includes extensive documentation and example programs to get you started quickly. Source is available.

List: \$249 Ours: \$224
FAXcetera #: 2088-0001 Return: F

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Apogee Software

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For return policy details,
turn to page 75.

GX EFFECTS 2.0

Genus Microprogramming

Use special effects without being restricted by an editor or slideshow program. Professional graphic effects are available from almost any graphics mode of the Hercules, CGA, EGA, VGA and most extended VGA adaptors. A full range of fades, wipes, splits, and smooth scrolling routines are included along with a complete music definition language with 40+ song examples. A Sound Blaster voice file interface is also included. Supports the same languages and compilers that the PCX Programmer's Toolkit supports. The PCX Toolkit, GX Graphics, or GX Text recommended, but not required.

List: \$199 Ours: \$179
w/source List: \$399 Ours: \$359
FAXcetera #: 1991-0003 Return: F
(Binary Version) L (Source)

GX Games

Genus Microprogramming

A collection of five full-featured games written using one or more of the toolkits in the GX Development series. Normally, a game package includes only the executable program. The executable games are provided, along with actual source code for each game in C, Pascal, and Basic. Not only are the games fun to play, they are an excellent learning tool for the GX Development Series. The games make the learning interesting and they cover most of the major concepts when writing any kind of graphics oriented program.

List: \$59 Ours: \$53
FAXcetera #: 1991-0008 Return: L

GX Graphics 2.0

Genus Microprogramming

A comprehensive graphics library written entirely in Assembly language for fast, tight code. GX Graphics replaces and

extends the capabilities of compiler libraries like Microsoft Graphics or the Borland BGI. All graphics primitives are supported, including: dots; lines; squares; rectangles; circles; ellipses; arcs; and filled primitives. Over 30 graphics modes are supported from Hercules through Super VGA.

List: \$249 Ours: \$224
w/source List: \$699 Ours: \$559
FAXcetera #: 1991-0006 Return: F
(Binary Version) L (Source)

GX Text 2.0

Genus Microprogramming

Relieves the programmer from having to write routines for user input, data entry and string display while in graphics mode. This product was designed for high speed text. Written in assembly language for the tightest, fastest code possible. You can load several different text styles and create or edit our own with the graphical font editor provided. Write text directly to

virtual buffers. Store and load fonts from libraries or the programs EXE. Supports the same languages and compilers that the PCX Programmer's Toolkit supports.

List: \$149 Ours: \$134
w/source List: \$349 Ours: \$279
FAXcetera #: 1991-0004 Return: F
(Binary Version) L (Source)

HALO Image File Format Library for DOS 1.0

Media Cybernetics

A collection of routines that add image file reading and writing to your applications. Makes your application instantly compatible with hundreds of graphics and imaging products. The HALO Image File Format Library works with any graphics library or can be used alone. Supports TIFF (Tagged Image File Format), PCX (PC PaintBrush), BMP (Windows Bitmap), and CUT (Dr. HALO).

List: \$349 Ours: \$279
FAXcetera #: 1045-0010 Return: N

HALO Professional

Media Cybernetics

HALO Professional is an all new implementation of the world's most popular graphics library for professional developers—HALO. Compared to previous versions, new HALO Professional is up to ten times faster. HALO Professional supports every significant graphics device produced today. Display adapters include most Super VGA, 8514/A, TIGA, TARGA, XGA and many others. HALO Professional supports more printers, plotters and scanners than any other graphics library. HALO Professional gives you more control over hard copy. Only HALO Professional offers you: image scaling to any size, complete control over color mapping, portrait or landscape orientation, print to file, and much more.

List: \$395 Ours: \$315
FAXcetera #: 1045-0001 Return: N

LEADTOOLS 32

Lead Technologies

A 32-bit run-time library for compressing, decompressing, converting, resizing, rotation, flipping, and viewing of images. LEADTOOLS 32 delivers speeds previously achieved only with hardware but in a software library. Compress color and greyscale images to over 200:1 ratio. Supports SPEG, LEAD CMP, TGA, TIFF, BMP, PCX, GIF, WMF, and EPS. Video supports VGA, SVGA, Hi-color, True color, TARGA+ and VISTA boards. Specify compilers.

List: \$995 Ours: \$899
FAXcetera #: 1005-0101 Return: F

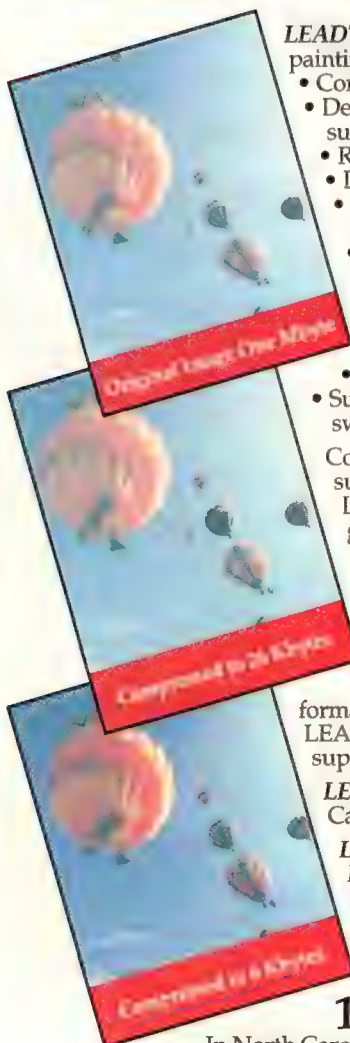
LEADTOOLS

Lead Technologies

A C run-time library for the DOS (LIB) developer, which allows the incorporation of image compression, viewing, form, at conversion, and other image processing into specific applications. Image can be flipped, rotated, reversed, resized and displayed any place on the screen. Compress color and grey scale images to over 200:1 ratio. Supports SPEG, LEAD, CMP, TGA, TIFF, BMP, PCX, GIF, and more. Video supports VGA, SVGA, Hi-color, and True color boards. Royalty Free! Specify DOS or DLL.

List: \$995 Ours: \$899
LEADTOOLS—No Compression Version
List: \$249 Ours: \$228
FAXcetera #: 1005-0102 Return: F

Don't Deflate Your Image.



LEADTOOLS — Tools to enhance image databases, painting, drawing and video production applications.

- Compress images up to 255 to 1
- Decompress images to video memory or supported file formats
- Resize an image "on the fly" for optimal display
- Display an image at specified locations on screen
- Accelerate electronic transmission of high quality images
- View supported image files on VGA, Super VGA and TARGA
- Convert between most popular image formats
- Find optimal 256-color palettes for 16-, 24- and 32-bit images
- Flip, rotate, reverse and resize images
- Support extended and expanded memory and swapping to disk

Compression and decompression functions support JPEG, JTIF, JFIF and JPG formats and LEAD's CMP format. LEAD's CMP format offers greater compression ratios and superior image quality. The compressed file can be decompressed to 8-, 16-, 24-, and 32-bit mediums.

All functions support TGA (8-, 16-, 24- & 32-bit), TIFF (8- & 24-bit), BMP (4-, 8-, & 24-bit), PCX, GIF, JTIF, JFIF, and CMP file

formats. A well-defined handle provides access to LEAD's functions for image file formats not currently supported.

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Call for a current list of supported compilers.

LEADTOOLS Windows DLL &

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1-800-637-4699

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PCX Toolkit 5.0

Genus Microprogramming

Lets developers create applications that can display, save, print, scroll, size & scale, capture and manipulate PCX format images. Over 90 routines are included. Access over 30 graphics modes and adapters, including the high resolution modes of the EGA, VGA and Super VGA. Supports Borland Turbo Assembler, Borland Turbo C and C++, Borland Turbo Pascal, Lattice C, MS BASIC, MS C/QuickC, MS FORTRAN, MS Macro Assembler, MS Pascal, MS QuickBASIC and Nantucket Clipper. Requires MASM to reassemble the source code and 256K memory. Supports Hercules, CGA, EGA, VGA and extended VGA graphics adapters.

List: \$249 Ours: \$224
w/source List: \$599 Ours: \$539
FAXcetera #: 1991-0002 Return: F
(Binary Version) L (Source)

PGL Toolkit 2.0

AnSoft, Inc.

PGL is a set of easy to use libraries allowing high resolution printing of bitmap images or vector drawings on most DOT Matrix, LaserJet, DeskJet, PaintJet, or PostScript printers as well as PCX format. Features include: C, BASIC, FORTRAN, PASCAL, Clipper, and Assembly language support; compatible with most DOS Extenders; device independent programming environment; full printer control (margin, layout, resolution, etc.); source code and UNIX versions available. NO ROYALTIES!

List: \$195 Ours: \$179
w/source code: List: \$595 Ours: \$536
UNIX w/source: List: \$995 Ours: CALL
FAXcetera #: 3098-0003 Return: L

LINKERS/LIBRARIANS

286 Overlay Series 3.12

AtLast! Software

Creates overlay structures for PLink86+, .RTLink, and .RTLink Plus. Architect scans object and library modules and builds a link response file to provide a very compact, reliable overlay structure. Handles up to 16,000 modules, overlays data, and handles indirect calls automatically. Optimizer re-engineers overlay structure for maximum performance. Specify PLink or .RTLink version.

List: \$289 Ours: \$259
FAXcetera #: 1002-3101 Return: F

386 Overlay Series 3.12

AtLast! Software

Creates overlay structures for PLink86+, .RTLink, and .RTLink Plus. Architect scans object and library modules and builds a link response file to provide a very compact, reliable overlay structure. Handles up to 64,000 modules, overlays data, and handles indirect calls automatically. Optimizer re-engineers overlay structure for maximum performance. Requires 386 or 486. Specify PLink or .RTLink version.

List: \$339 Ours: \$305
FAXcetera #: 1002-3102 Return: F

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fingertips!



Blinker 2.0

Blink, Inc.

Fast dynamic overlay linker for C, C++, ASM, Basic, QuickBASIC, Fortran, Pascal, Clipper, etc. with new integrated memory swap function designed to save time and memory. Automatically creates fast, stable overlaid .EXEs to reduce memory requirements. Uses EMS/XMS memory to save the currently executing program and run a second within the first. Features CodeView and limited Turbo debugger support.

List: \$299 Ours: \$269
FAXcetera #: 2534-0001 Return: F

OPTLINK/Compress 3.0

SLR Systems

OPTLINK/Compress 3.0 is the "World's only Compressing Overlay Linker." This linker, as a drop-in replacement for LINK, permits storage of large programs on one floppy disk. Other beneficial features include calling as many as 8,192 overlays, support of function pointers, EMS/XMS caching, compression of the root and the overlays, both small and large model overlays and auto-allocate libraries. OPTLINK/Compress needs only 1K extra memory for its decompression routine and is Code View-compatible. It also sets no limitation on the number of publics, modules, libraries or segments being linked.

List: \$350 Ours: \$315
FAXcetera #: 1769-0001 Return: L

Overlay Toolkit 1.22

Lloyd Bush, Inc.

The Overlay Toolkit consists of Overlay Master and Overlay Probe. Overlay Master is a tool for programmers who use the overlay feature of PLink86+ or a compatible linker in their application programs. It analyzes the object modules to automatically design an effective overlay structure. Overlay Probe is a companion tool which allows you to easily make adjustments to the overlay design.

Small model List: \$395 Ours: \$349
Large model List: \$995 Ours: \$899
FAXcetera #: 2850-0001 Return: N

PLink86+ 2.3

Lifeboat Software

PLink86+ is a linker that provides advanced overlay capabilities. It handles any compiler or assembler producing standard Intel or Microsoft OBJ files. Virtual memory management ensures ample capacity for symbol and common block names (nearly 33,000). PLink86+ supports an unlimited number of modules and up to 4,095 overlays nested up to 32 deep. It merges object modules, caches, overlays in extended memory and automatically reloads overlays upon function return. PLink86+ can also link DOS files under OS/2.

List: \$395 Ours: \$335
FAXcetera #: 0233-0004 Return: F

PolyLibrarian 2.3

Lifeboat Software

PolyLibrarian is a utility for creating and managing object module libraries, including OS/2 and Windows IMPORT libraries. It works with compilers and assemblers that produce object modules compatible with Microsoft linker, PLink86+ or other compatible linkers. It lets you add, delete, replace and extract object modules to and from library files. PolyLibrarian time-stamps each module in a library. Any identifier can be changed to

prevent name conflicts and the user can substitute modified versions of library routines. PolyLibrarian can delete debug records without recompiling source code.
List: \$249 Ours: \$225
FAXcetera #: 0233-0005 Return: F

.RTLink

Pocket Soft, Inc.

Memory Image reduction (typically) 33-67% through multiple and nested overlays. No source changes. Smart overlay caching from conventional, extended, or expanded memory (and disk). Dynamic Data overlays allow storage of changing variables in overlays. Other features assist overlaying static data. Utilities to help define and refine your overlay structure. Major disk savings by storing common code once on disk. Works with almost all MS-DOS programming languages.

List: \$295 Ours: \$265
FAXcetera #: 1987-0002 Return: L

.RTLink/Plus with VML

Pocket Soft, Inc.

Executes several megabyte programs. Minimum 100K conventional memory required. No source code changes. Automatic or fine tune. Executes in expanded (if present), intelligent, automatic caching of 'pages' from conventional, disk, expanded (if present), extended (if present). Software solutions for XT, AT, 386 and above. Outstanding runtime performance. Supports most MS languages, CodeView. Supports all features of .RTLink plus profiler.

List: \$495 Ours: \$445
FAXcetera #: 1987-0003 Return: L

PASCAL LANGUAGE

COMPILERS

LPI-PASCAL

Liant Software Corp.

Liant's Pascal is an implementation of the ANSI/IEEE Pascal 770X3.97-1983 standard, and conforms to the ISO/7185 Level O standard. Liant's Pascal is a quality Pascal compiler, specifically designed to meet the needs of computer manufacturers, large software development firms, and the federal government. Extensions allow compatibility with most Pascal dialects. Liant's Pascal supports external subprograms, separate compilation of Pascal units, and several other constructs and features that exceed the standard. Liant's Pascal is offered under the UNIX operating system, and runs on popular hardware configurations. These include Motorola's 680X0 technology, the RISC-based 88000, AT&T's WE32XXX, and Intel's 80386.
List: \$695 Ours: \$629
FAXcetera #: 1952-0001 Return: L

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Microsoft Pascal 4.0

Microsoft Corp

Microsoft Pascal is powerful enough to push the limits of your personal computer. With large symbol table support and OS/2 support, you can write larger programs such as symbol-heavy Window applications with ease in both OS/2 and MS-DOS. Also, for the first time, the revolutionary Microsoft CodeView Debugger and the Microsoft Editor have been included for fast, efficient program development. You can use data up to the limit of available memory. Then link in separate modules and use overlays. Microsoft Pascal also comes with the BCD and floating point math libraries, including IEEE floating point emulation and math coprocessor support. And it supports direct inter-language calling to modules written in Microsoft C, FORTRAN or Macro Assembler.

List: \$300 Ours: \$212
FAXcetera #: 1269-0026 Return: L

Turbo Pascal 6.0

Borland International

Makes object-oriented programming easy. Version 6.0 takes you from structured programming to object-oriented programming step-by-step. You can now learn object-oriented programming in the comfort of the familiar Turbo environment. All the object-oriented terminology and concepts you learn can be applied to C++. Object-oriented extensions feature dynamic and static objects, virtual and static methods, constructors, destructors, and object constants.

List: \$150 Ours: \$113
FAXcetera #: 1861-0009 Return: L

Turbo Pascal Professional 6.0

Borland

Value-bundled combination of Turbo Pascal 6.0/Turbo Debugger & Tools 2.0.

List: \$300 Ours: \$225
FAXcetera #: 1861-0010 Return: L

FILE MANAGEMENT

B-Tree Filer 5.2 (single user)

TurboPower Software

Makes writing network compatible database applications easy and reliable. Applications can run in single user mode, or on Novell, MS-NET, 3Com, and other networks. Features include fixed and variable length records, two billion records per database, utility units for browsing databases, rebuilding corrupted indexes, sorting, and more. Network version available. Full source code included. No royalties. Requires Turbo Pascal 5.0, 5.5, or 6.0, or Turbo Pascal for Windows.

List: \$139 Ours: \$109
Network: List: \$189 Ours: \$149
FAXcetera #: 1565-0002 Return: F

TOPAZ and TOPAZ LAN 3.0

Software Science, Inc.

Single- and Multi-user Relational Database Management System to write complete applications with "dBASE-like" syntax in Turbo Pascal or QuickPascal. Read from, write to, and create dBASE data and memo files. SELECT up to 25 data areas with up to 16 indexes. Database positioning via GoTop, GoBottom, GO, SKIP, and so on. Five powerful ways to locate and access data: Indexed FIND, "Soft" Find, Soundex, SEARCH and PEEK. SAY prompts, GET variables at any screen coordinate, SET COLOR TO, PICTURE and RANGE clauses, custom VALIDATION procedures. Complete full-featured, program-

mable Wordstar-like editor for both memo and text files. Utilities to create and browse dBASE files, a dBASE-like report and code generator, and a full-featured Phone Book application with commented source code. 600 page manual.

Single User List: \$99 Ours: \$89
Multi User List: \$149 Ours: \$134
FAXcetera #: 1804-0001 Return: F

Topaz Multi-user 3.0

Software Science, Inc.

Write multi-user applications with "dBASE-like" syntax in Pascal. Supports file and record locking of 25 concurrent databases each with up to 16 indexes. TOPAZ reads/writes/creates DATAFILES and supports dBASE memo fields. Comes with a windowed browser, free utilities, a full-featured text editor, dBASE-like report and code generator.

List: \$149 Ours: \$134
FAXcetera #: 1804-0001 Return: F

LIBRARIES

ASYNCH PLUS 5.0

Blaise Computing Inc.

Asynch Plus is a comprehensive set of routines that allow you to build asynchronous communications into Pascal programs and solve the problems of serial communications. You can set port options, capture data reliably, command modems, transfer files using X and YMODEM file transfer protocols, and control up to four ports simultaneously.

Supports Turbo Pascal 4.0 or later.
List: \$219 Ours: \$175
FAXcetera #: 1652-0004 Return: F

Async Professional 1.0

TurboPower Software

Async Professional is a powerful, up-to-date library of asynchronous communications functions for Turbo Pascal programmers working in the DOS environment. Features include object-oriented and procedural programming interfaces, buffered I/O up to 115K baud, buffered UART support, file transfer protocols including ZMODEM and Kermit, built-in tracing and debugging, terminal emulation, and modem control. Full source code included. No royalties. Requires Turbo Pascal 5.5 or 6.0.

List: \$139 Ours: \$109
FAXcetera #: 1565-0004 Return: F

Object Professional 1.1

TurboPower Software

An object-oriented library for Turbo Pascal. It provides over 100 high-level object types with over 2000 methods for user-interface design, data manipulation, and low level system access. System-oriented routines allow swappable TSRs in 6K of RAM and more. Includes complete source code, full documentation, and pop-up help. No royalties. Requires Turbo Pascal 5.5/6.0.

List: \$189 Ours: \$149
FAXcetera #: 1563-0003 Return: F

Power Tools Plus 5.1

Blaise Computing, Inc.

Power Tools Plus is a general purpose library of functions and procedures that allows you to create a sophisticated virtual windowing system with borders and drop shadows supporting all styles of menus with integrated mouse support. Routines for building ISRs and TSRs are provided. Supports Turbo Pascal 4.0 or later.

List: \$169 Ours: \$135
FAXcetera #: 1652-0003 Return: F

Turbo Professional 5.1

TurboPower Software

A library of over 600 procedures and functions specifically for Turbo Pascal. The routines include TSR management, data entry screens, pop-up help routines, DOS functions, EMS and extended memory access, and much more. Full documentation and source code is included. No royalties. Requires Turbo Pascal 4.0, 5.0, 5.5 or 6.0, or Quick Pascal.

List: \$125 Ours: \$99
FAXcetera #: 1565-0004 Return: F

Turbo Vision Development

Toolkit 1.0

(Version 2.0 w/C++ support

available June 1st)

Blaise Computing, Inc.

A set of utilities and object libraries designed especially for use with Turbo Pascal 6.0's object-oriented, event-driven framework, Turbo Vision. Includes a Resource Editor for interactively creating or changing dialog boxes and other resources, a utility to convert Turbo Vision resources into Windows resource script files and an object library that extends Turbo Vision's capabilities. Supports Turbo Pascal 6.0. (C++ support available June 1st).

List: \$169 Ours: \$135
FAXcetera #: 1652-0013 Return: F

PROTOTYPING

Dan Bricklin's Demo II 3.0

Lifeboat Software

Demo II is a tool for producing application prototypes, demonstrations, and tutorials (CBT). Can be used quickly and simply by drawing or capturing screens and displaying them like slides. Advanced features can be used to construct prototypes that interact with users and respond just like live programs. Built-in text screen design tools. Text and graphics screen capture program included. Mouse support. Unlimited runtime distribution, subject to license agreement.

List: \$249 Ours: \$229
FAXcetera #: 1418-0001 Return: F

Dan Bricklin's Demo II

Professional 3.0

Lifeboat Software

Upgraded version for Demo II for the professional user. The professional version includes the ability to encrypt files so they cannot be modified by unauthorized users and removes the copyright notice from the beginning of the demo. Upgrade pricing available for standard Demo II users.

List: \$995 Ours: \$799
FAXcetera #: 1418-0001 Return: F

Instant Prototyper (for MS-DOS) 3.0

WinSoft

Designs fancy data oriented applications. Demo to users on DOS text or MS-Windows without programming. Make changes based on their feedback. Supports data entry and validations including mandatory, protected, picture, range checks and lists. CUA compatible objects include main windows, dialogs, mouse, menus, buttons, hypertext, scroll bars, list boxes, direct-ories, text editor and spreadsheet-like scrollable tables.

List: \$99 Ours: \$89
FAXcetera #: 2867-0001 Return: F

INSTANT REPLAY PROFESSIONAL

(IRPRO) 2.5

Instant Replay Corporation

IRPRO is an authoring/development software system for the creation of: 1) Demo disks and software ads, 2) tutorials, training materials, CBT, 3) professional presentations: a) Laserdisk based, and b) computer managed slideshows. IRPRO manages the capture of audio, video, graphics, animations and compressed video for incorporation into your presentation. Royalty free distribution. DOS based for compatibility with over 80% of the PC installed base.

List: \$795 Ours: \$619
FAXcetera #: 1760-0001 Return: F

John Bickart's Clip Art

for Demo II

Lifeboat Software

Add sights, sounds, and color to your Demo II presentation with John Bickart's Clip Art for Demo II. Cut and past directly from the Clip Art Libraries directly into your demonstration or prototype. Graphics Library - over 300 .PCX images ready to use with Demo II, mixed VGA, EGA, CGA and Mono. Sound Library - Melodies, Sound Effects, electronic piano player, and note range. Color Library - colors, menus, and text windows.

List: \$79 Ours: \$72
FAXcetera #: 0233-0012 Return: F

John Bickart's CBT Tool Kit

for Demo II

Lifeboat Software

Build effective tutorials rapidly with John Bickart's CBT Tool Kit makes it better by adding pre-built templates and examples that you can cut and paste directly into your own lessons. Contents include: working CBT models, student responses to a question, feedback on student progress, gaming as an instructional tool, expert reviews for wrong answers and much more! Includes John Bickart's Clip Art for Demo II.

List: \$169 Ours: \$152
FAXcetera #: 0233-0013 Return: F

John Bickart's Starter Kit

for Demo II

Lifeboat Software

Tap into the real POWER of Demo II! Templates, examples, and tutorials covering all aspects of Demo II - modifiable to fit your needs. Includes advanced templates for common situations (Sales Demo, Mainframe Simulation, CBT Tutorial, and more). Self-Guided tour shows you how Demo II really works. "My First Project" Guide gives detailed instruction on prototype and demo development. Eight tutorials cover every major Demo II feature in detail.

List: \$149 Ours: \$134
FAXcetera #: 0233-0007 Return: F

Personal Rexx 3.0

Quercus Systems

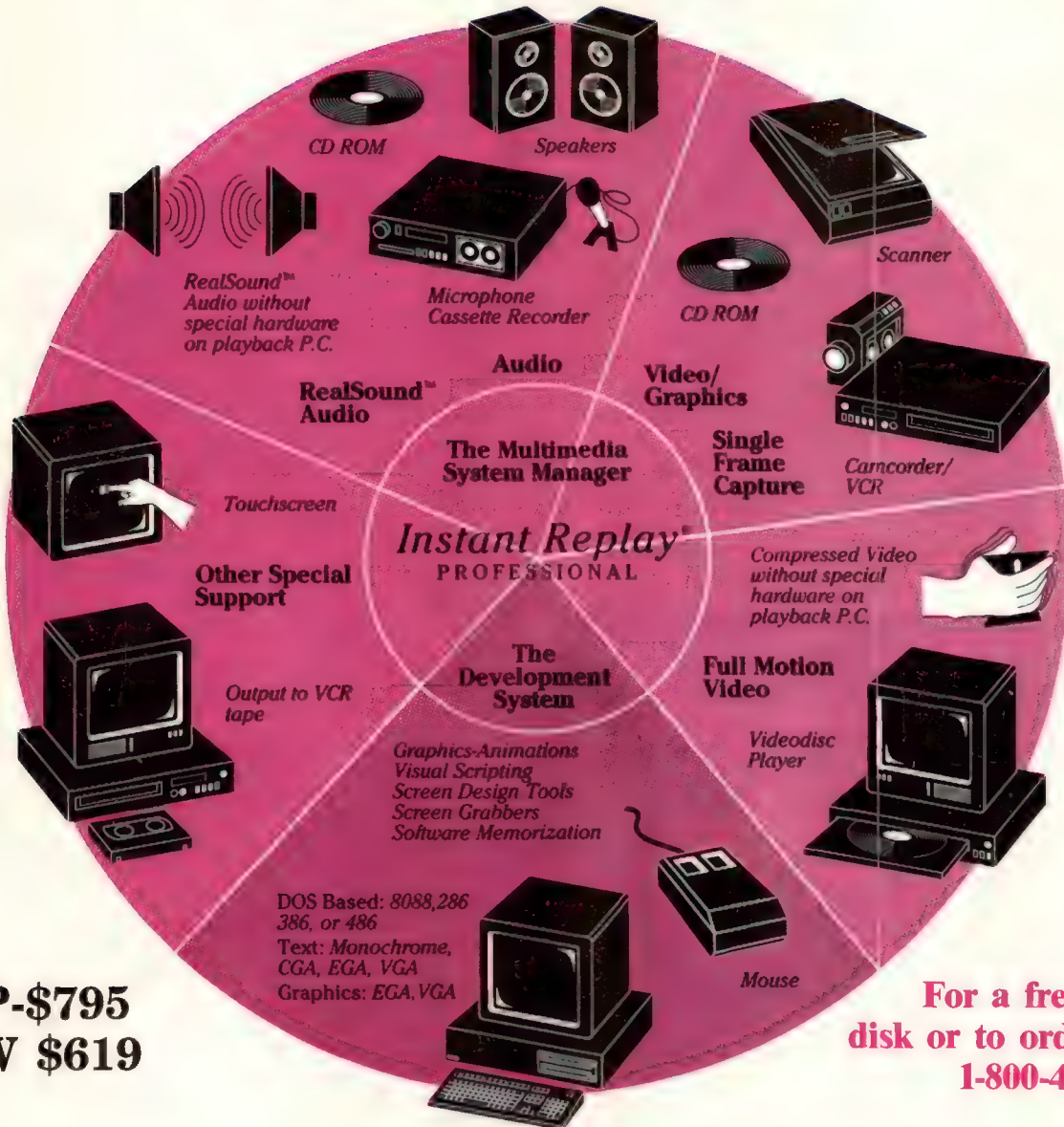
Personal Rexx is a complete implementation of the SAA Rexx Procedure Language for OS/2, DOS, and Windows. It supports batch files, prototyping, application script writing, and general personal programming. Numerous functions for file system access, operating system control, and screen management are included. A new swapping capability minimizes storage used in DOS.

DOS List: \$150 Ours: \$135
OS/2 List: \$175 Ours: \$158
FAXcetera #: 2391-0001 Return: F

For return policy details, turn to page 75.

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Proteus 6.0

Genus Microprogramming
Create self-running or interactive software demos, tutorials, and prototypes that respond to keystrokes, mouse events, and more! Includes 30+ video effects, clear pull-down menus, slide advance control, full mouse support, screen grabber support, a built in help system, and the ability to group demo files into a single .EXE file. Comes bundled with PC Paintbrush IV. No sign-on screen.
List: \$349 Ours: \$314
FAXcetera #: 1991-0001 Return: F

Show Partner F/X 3.6

Brightbill-Roberts
Create and show dynamic presentations using color, graphics, animation, special effects and sound. Features interactive capabilities, branching and an advanced memory management system. Create computer generated board-room or sales presentations, interactive training materials or distribute a demo disk featuring your company product or message.
List: \$350 Ours: \$315
FAXcetera #: 1001-6002 Return: L

Tour de IRPRO 1.0

Instant Replay Corporation
Contains two sections. 1) Tour de IRPRO is an overview of the features of Instant Replay Professional (IRPRO), and 2) the IRPRO Hands-on Tutorial provides step by step instructions on how to use IRPRO features to develop a Demo disk, Software Ad, Tutorial, and/or Training Materials-PC hard drive or diskette based.
List: \$150 Ours: \$119
FAXcetera #: 1760-0002 Return: N

REFERENCE GUIDES

Expert Help - Personal Use 3.0

SofSolutions
The Expert Help Hypertext System is a Norton Guides compatible hypertext system. With Expert Help, you have instant access to hundreds of topics while using just 1K of memory. Features include: Auto-lookup, VGA and Mouse Support, Text Pasting, Global Searching and much more. Also included are tools that let you create your own Help files or modify ones that you already have. MS-DOS, PC-DOS. Requires a hard disk and 1k of main memory w/64k EMS. Specify 5.25 or 3.5 inch diskettes.
List: \$129 Ours: \$116
Comp. Upgrade List: \$179 Ours: CALL
FAXcetera #: 1893-0007 Return: O
60 Day guarantee. Free technical support.

Expert Help - LAN 3.0

SofSolutions
The Expert Help Hypertext System is a Norton Guides compatible hypertext system. With Expert Help, you have instant access to over 100 topics while using just 1k of memory. Features include: Auto-lookup, VGA and Mouse Support, Text pasting, Global Searching and much more. Also included are tools that let you create your own Help Files or modify ones that you already have. The LAN version contains a server license with no concurrent use limit. MS-DOS, PC-DOS. Requires a hard disk and 1k of memory w/ 64k EMS. Specify 5.25 or 3.5" diskettes.
List: \$379 Ours: \$341
FAXcetera #: 1863-0007 Return: O
60 day guarantee. Free technical support.

Expert Help Hypertext System Distribution Kit #1 3.0

SofSolutions
Distribution Kit #1 is a toolkit for developing and distributing your own Norton Guides compatible Hypertext systems. With Kit #1, you get the tools to create/modify Help Files and a distribution Engine that can read only the Databases that you specify. You may distribute 100 copies of the Distribution Engine. Kit #1 is perfect for developers with customers that don't require access to the full range of available EH/NG Help Files. Kit refills are available. MS-DOS, PC-DOS compatible. Requires a hard disk. Full 60 day guarantee and free tech support. Specify 5.25 or 3.5" diskettes.
List: \$329 Ours: \$249
FAXcetera #: 1893-0008 Return: O

Expert Help Hypertext System Distribution Kit #2 3.0

SofSolutions
Distribution Kit #2 lets you develop and distribute your own Norton Guides compatible Hypertext systems. Kit #2 includes the tools needed to create Help Files and a license to distribute up to 50 copies of the non-restricted Distribution Engine. This kit is ideally suited for developers with customers who want full access to all available EH/NG Help Files. Kit refills are available. MS-DOS, PC-DOS compatible. Requires a hard disk. Full 60 day guarantee and free tech support. Specify 5.25 or 3.5" diskettes.
List: \$299 Ours: \$229
FAXcetera #: 1893-0009 Return: O
60 day guarantee

On-Line Help 2.0

Opt-Tech Data Processing
Two-systems-in-one that allow you to easily integrate help windows into your applications. The first system is invoked via a call from your program, allowing you complete control of which help window is displayed and the action to be taken when the help window is cleared. The second system is a "memory resident" version that is invoked by "hot keys"; no calls from your program are necessary. Both systems restore the original screen when the help window is cleared and give you complete control over the help window content, size, location and color.
List: \$149 Ours: \$134
FAXcetera #: 1416-0003 Return: L

UpShot 1.1

Autumn Hill Software, Inc.
UpShot is an On-Line Help utility that allows developers and end users to construct and then use large-scale OnLine documentation files, such as manuals, reference books, dictionaries, phone lists, etc. UpShot manuals are like a true book with a Table of Contents, and index and numbered pages. UpShot's access engine can be installed and left resident as a TSR or can be run from the command line as a standard program. UpShot also includes utilities which allow you to build manuals, print manuals on LaserJet printers, capture text screens and alter UpShot's interface.
List: \$175 Ours: \$158
FAXcetera #: 2263-0006 Return: F

REXX LANGUAGE

Portable/REXX kilowatt software

A complete implementation of REXX as specified in Prentice-Hall's book titled "The REXX Language". All standard statements and built-in functions are provided. Additional functions enable the user to maximize productivity in the MS-DOS environment. The product is excellent for developing complex batch scripts REXX parsing capabilities are useful for a wide range of file transformations. Variable pool interfaces are provided for exchanging data with Microsoft C and Borland C/C++ programs. Includes product guide, 360KB of online help, and over 80 online example programs.
Portable REXX List: \$ 70 Ours: \$63
w/opt. P/H book List: \$100 Ours: \$90
FAXcetera #: 1001-4401 Return:

SORT UTILITIES

AUTOSORT 1.29

Computer Control Systems, Inc.
A SORT/MERGE/SELECT utility written in assembly, designed for very large files with fixed-length fields with fixed-length records for fast sorting and high transfer rate. May be used memory resident or linked directly with application program. May be used with MS-DOS compatible networks. File size limited only by DOS/ Disk space. Record in excess of 5,000 bytes. Path names supported.
List: \$150 Ours: \$125
FAXcetera #: 1507-0001 Return: N

Opt-Tech Sort 4.0p

Opt-Tech Data Processing
A high performance Sort/Merge/Select Utility. It can be used as a stand-alone utility or called as a subroutine to over 30 programming languages. Process files of any size. Many file types and data types are supported. It can sort, select, or merge on multiple key fields. Other features include duplicate record elimination, reformatting records, use of expanded memory and a comprehensive user's manual. Available for DOS, Windows, OS/2, and UNIX.
List: \$149 Ours: \$135
FAXcetera #: 1416-0001 Return: L

SOURCE MAINTENANCE

codan MS-DOS 2.0 OS/2 2.05 Implements

codan is a C source code analyzer, including a powerful database, built-in reports and interfaces to popular editors for source browsing. Codan's database includes information about functions, variables, files, declarations and more. "...a powerful tool for the professional developer managing data from many large and complex C programs." (Computer Language)
List: \$395 Ours: \$359
FAXcetera #: 2141-0002 Return: F

For return policy details, turn to page 75.

Opt-Tech Sort

If you need to Sort or Select any quantity of data rapidly, then you need Opt-Tech Sort. It is the **High Performance Sort / Merge / Select** utility. Opt-Tech Sort can be used as a stand-alone utility or CALLED as a subroutine to your programs (over 30 languages are supported.)



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CodeCheck 2.0

AbraXas Software

CodeCheck Version 2.0 is a program-mable tool for analyzing all C and C++ source code on a file or project basis. CodeCheck is input compatible with all variants of K&R, H&S, ANSI C and C++. CodeCheck is designed to solve all of your portability, maintainability, complexity, reusability, quality assurance, style analysis, library/class management, code review, software metric, standards adherence, and corporate compliance problems.

DOS/Mac List: \$495 Ours: \$470
OS/2 List: \$695 Ours: \$659
Unix List: \$2000 Ours: \$1895
FAXcetera #: 2006-0002 Return: F

MKS Make 2.5

Mortice Kern Systems

MKS MAKE offers users an efficient way to automate the production and maintenance of any project large or small. Automatically regenerates the desired program by understanding the interdependencies among all of the components. Users save valuable time and eliminate needless errors in recompiling. User defined meta-rules allow you to work directly with MKS RCS or other version control systems, handle large object libraries and remotely access files over a network. Includes a UNIX-compatible AR object code librarian, that can be used with libraries generated with Microsoft LIB. The MAKE description file can also be processed, depending on the compiler and environment that MKS MAKE is running under.

List: \$149 Ours: \$125
FAXcetera #: 1634-0003 Return: F

MKS Programming Platform

Mortice Kern Systems

Made up of four members of the MKS software family: MKS Toolkit, MKS MAKE, MKS RCS and MKS LEX & YACC. MKS Toolkit provides the power and flexibility of more than 150 UNIX utilities on DOS or OS/2. MKS Toolkit includes an excellent tutorial manual and an excellent technical reference manual. MKS Toolkit tracks the emerging POSIX/FIPS standard. MKS Make efficiently automates the production and maintenance of any project. User-defined metarules allow you to work directly with MKS RCS, handle large object libraries and remotely access files over a network. MKS RCS (Revision Control System) allows programmers, systems administrators and project managers to control and record revisions to text or binary files. MKS LEX & YACC are construction compiler tools for DOS or OS/2. Together they act as a program generator that takes descriptive input and writes a program module.

List: \$665 Ours: \$538
FAXcetera #: 1634-0009 Return: F

MKS RCS

(Revision Control System) 5.2

Mortice Kern Systems

MKS RCS, now with an advanced user interface enables programmers, systems administrators and project managers to efficiently control and record the revisions to text or binary files such as program source code, manuscripts and catalogs. Resolves access conflicts on a network, preventing programmers from over-writing each other's work. Using reverse delta storage, MKS RCS maintains a complete history of changes, including date and time of change, author and reason for the change. It allows the retrieval of any version of the file, by date, release

number or a user-assigned name.

Unlimited branching from the main family of versions is supported.

DOS List: \$249 Ours: \$205
DOS & OS/2 List: \$399 Ours: \$319
FAXcetera #: 1634-0004 Return: F

Multi-Edit WorkGroup Connection

American Cybernetics

Multi-Edit WorkGroup Connection is designed for the professional development team and contains network versions of: Multi-Edit Professional; Mul-T-LIB (a customized version of Burton Systems Software's TLIB Version Control); and Multi-Mail, a comprehensive Network-E Mail System. Everything is seamlessly integrated and fully customizable.

List: \$895 Ours: CALL
FAXcetera #: 1846-0007 Return: F

Source Manager 1.10

TransWare Enterprises Inc.

Source Manager is a source code control program which features revision and version control capabilities, detailed revision history reports and compatibility with CDC's UPDATE utility program. Source Manager is designed to handle from small to enormously large program source files in a configuration that satisfies the most demanding software quality assurance requirements outlined by ANSI/IEEE, NBS, etc.

List: \$139 Ours: \$125
FAXcetera #: 1000-6301 Return: L

Sourcerer's Apprentice-Version Control for the Professional

Solution Systems

Version control with single keystroke access from BRIEF. Compare and merge code versions on-screen in BRIEF. Prevent simultaneous updates to source files. Group related files for simplified check-in/out and for release development. Professional version includes Branch/merging for multiple lines of development. Full-featured reporting facility.

List: CALL Ours: CALL
FAXcetera #: 1271-0004 Return: L

SourceSafe Version Control 1.0

Icarus Software

SourceSafe is a powerful, affordable version control system. Features include an unlimited hierarchy of projects; "reverse-delta" histories, including project snapshots and commentary; maintenance of parallel variations of projects; and management of multiple users. Other features include unparalleled ease-of-use and on-line help. SourceSafe eliminates the need for extensive archiving by tracking changes and rapidly regenerating any previous version of a document.

List: \$245 Ours: \$221
FAXcetera #: 1000-7301 Return: O
Lifetime guarantee.

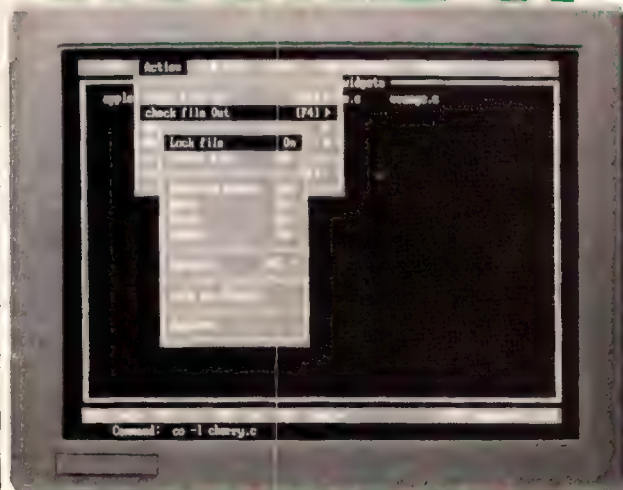
TLIB™ 5.0

Burton Systems Software

A Version Control System for source code, documentation and binary files. It has sophisticated features at an affordable price. It creates and maintains compact, annotated libraries containing all past and current versions of each file and a complete revision history including date, author, comments, etc., for each version. Also check-in/out locking, manual & automatic branching, integration with Opus™ MAKE and Slick™ MAKE, and truly amazing speed.

List: \$139 Ours: \$125
FAXcetera #: 1611-0001 Return: L

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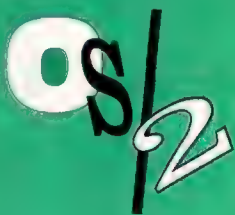
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SEE PAGES 39-41
FOR



SPECIALS!

CODE GENERATORS

DBAPrep 2.10 N Systems

DBAPrep includes an open preprocessor, precompiler, and DBATool for ANSI Embedded SQL development. DBAPrep allows Embedded SQL to be intermixed with C/C++ and generates C API source, supporting standard and extended features, for Sybase, SQL Server, SQLBase, XDB, and Pioneer Software's QE Library (supports Oracle, Informix, DB2, EE DBM, NetWare SQL, dBASE, Paradox) and others. DBATool generates Unique/Entity/Referential Integrity Rules, ER Diagrams, # defines, Include Files, Data Dictionary from the Schema and more. Available for Win/DOS/OS/2, UNIX, VMS, MAC.
List: \$395 Ours: \$349
FAXcetera #: 1002-0091 Return: L

Gpf—GUI Programming Facility 2.0 Gpf Systems, Inc.

Gpf is a fully integrated WYSIWYG OS/2 PM development environment. Gpf generates well structured ANSI C from your design. The WYSIWYG GUI designer offers complete client area support of Controls, Icons/Bitmaps, User Controls, fonts, colors, etc. Built-in user logic, and extended contextual help are linked to controls and menus as they are created. Built-in functions to fill list/combo boxes from SQL DataBase tables. Fully supports the new CUA 91 controls—Notebook, Slider, ValueSet, and Container.
List: \$995 Ours: \$845
FAXcetera #: 3582-0001 Return: N

OS/2 PM Switch-It™ Code Generation Module Blue Sky Software

OS/2 PM Switch-It™ Code Generation Module allows WindowsMAKER Professional to generate optimized high quality C source code for OS/2 Presentation Manager. WindowsMAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the user's own code is

never modified by the code generator. Applications may be migrated across platforms and languages.

List: \$495 Ours: \$445
FAXcetera #: 2602-0011 Return: F

ToolBook 1.0

(for OS/2 Presentation Manager) Asymetrix Corporation

A software construction kit to build custom applications for OS/2 Pres. Mgr. more quickly and easily than with traditional computer languages. You can build graphical applications such as: computer-based training, flat-file databases, data-base front-ends, prototyping, simulations, and interactive presentations. Includes OpenScript®, a powerful object-oriented programming language. OpenScript is a complete, extensible language with custom functions, DDE and DLL support.
List: \$395 Ours: \$345
FAXcetera #: 2776-0002 Return: L

WindowsMAKER Professional Code Generator for OS/2 PM Blue Sky Software

Snap-on code generation module allows WindowsMAKER Professional to generate C code for OS/2 Presentation Manager.
List: \$995 Ours: \$795
FAXcetera #: 2602-0007 Return: L

zApp for OS/2 2.0

Inmark Development Corporation
zApp for OS/2 2.0 is a C++ Application Framework that frees you from the complex details of programming in OS/2 PM and gives you single source code capability with MS Windows, DOS, and UNIX X.MOTIF. zApp's over 130 objects deliver you to Dialogs, Windows, Controls, Menus, Fonts, Graphics, Bitmaps, MDI, Printing, Memory Management, DDE, Object Persistence and Forms. Comes with source code. Bundled with zApp for windows with source.
List: \$695 Ours: \$619
FAXcetera #: 1000-6402 Return: F

DATABASE

Q+E Database Editor (Q+E), Server Database Edition for OS/2 2.6 Pioneer Software

Over 2 million Windows users rely on Q+E to bring data to their desktops! Q+E can directly access, Query and edit database information stored on PCs, LANs and mainframes in 14 database formats. Then Q+E can easily integrate data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE, Oracle, Ingres, Btrieve, OS/2 EE DBM, SQL Server, NetWare SQL, SQL Base, DB2, XDB, Sybase, Excel, ASCII test files. Windows version available.
List: \$299 Ours: \$269
Five User License List: \$999 Ours: \$899
FAXcetera #: 2625-0101 Return: F

Q+E Database Editor (Q+E), Standard Edition for OS/2 2.6 Pioneer Software

Over 2 million Windows and OS/2 users database formats: Oracle, Ingres, dBASE, Sybase, OS/2 EE DBM, SQL Server, NetWare SQL, Btrieve, XDB, SQL Base, Excel, ASCII. Distribution agreement may apply. Windows version available.
List: \$399 Ours: \$359
FAXcetera #: 2625-0102 Return: F

DEBUGGERS

Periscope/Remote for OS/2 (V.1.X) Periscope

Provides full-screen, source-level support for debugging Base and PM device drivers under OS/2 1.2 or 1.3. Operates at the systems level (ring 0) with minimal impact on the system being debugged. Offers easy access to any memory location in the system, and can coexist with an applications level (ring 3) debugger. Requires two systems, the host system runs regular periscope software in DOS. It acts as the debugging system. The second system, the target, runs Periscope/Remote and the software you are debugging. The two systems are connected together via a null-modem cable. Periscope Model IV hardware can be added for real-time debugging of the target system. 32-bit support will be available with the release of OS/2 2.0.
List: \$195 Ours: \$176
FAXcetera #: 1576-0006 Return: L

Periscope/32 for OS/2 (V.1.X) Periscope

Periscope's device driver debugger for OS/2 version 2.0. This full-screen symbolic and source level debugger will significantly increase productivity for Developers of OS/2 2.0 Base and PM drivers. The debugger operates at the systems (ring 0) level with minimal impact on the system being debugged. It will offer easy access to any memory location in the system, and is compatible with an applications (ring 3) level debugger. Periscope/32 for OS/2 2.0 requires a host system (with an 80386 or higher CPU) and target system (running OS/2 2.0) connected by null modem cable. Includes host and target software, as well as break-out switch for crash recovery.
List: \$395 Ours: \$401
FAXcetera #: 1576-0009 Return: L

SMALLTALK LANGUAGE

Smalltalk/V PM

Digital
Smalltalk/V PM is a fully integrated object-oriented development environment for OS/2 PM. It produces fully compiled executables incrementally, and includes the ability to create PM objects easily and quickly. The system includes thousands of reusable objects, a pushbutton source-level debugger with single-stepping and object inspection, DDE support, multitasking and more. Smalltalk/V PM can call DLLs written in other languages, and is code compatible with all other Digital Smalltalk/V environments. All Smalltalk/V PM source code is included.
List: \$500 Ours: \$395
FAXcetera #: 1469-0004 Return: L

TESTING TOOLS

SQL:Replay Software Quality Automation

SQA: Replay is a macro reorder for OS/2 applications. SQA: Replay can easily record keystrokes, mouse movements and button clicks for replay at any time. Other features include full-screen or windows mode, variable speed playback, wait states, automatic window capture and repositioning, and more. SQA: Robot, a full-featured automated test regression tool.
List: \$99 Ours: \$89
FAXcetera #: 1000-1803 Return: L

SQA:Robot for OS/2 2.0 Software Quality Automation

A menu-driven record/capture/playback tool designed to automate performance and regression testing for OS/2 PM. With a simple point and click SQA: Robot begins recording every action within the application. Keystrokes, mouse movements and window positions become part of a script which can be played back to verify that an application is performing correctly. Robot can test for the existence of files, window, and tasks; and compare test results with baselines. Test procedures can be saved for unattended execution.
List: \$995 Ours: \$899
FAXcetera #: 1000-1802 Return: O

ADDITIONAL OS/2 TOOLS

ObjectPM Raleigh Systems

Object oriented software design, and OS/2 are premier technologies of the 90's. Together they allow applications to be created of incredible sophistication and power. ObjectPM is a C++ class library that provides the means for creating such applications. ObjectPM is the first class library that is geared specifically for OS/2 and the Presentation Manager. It provides over 120 classes of objects encapsulation windows, controls, graphic tools, forms, threads, and much more.
List: \$499 Ours: \$439
FAXcetera #: 1002-0801 Return: L

OS/2-Server for OS/2 JetForm Corporation

Prints forms designed with JetForm Design in multi-user & network applications. Merge variable length data, any client LAN including JetForm Filler can request forms & data merge services, one request can print multiple forms on multiple printers. 20-user included.
List: \$1695 Ours: CALL
Unlimited: \$3495 Ours: CALL
FAXcetera #: 0020-5205 Return: O

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44-46 for Articles on
developing on OS/2!



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Windows & OS/2[®]
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Porting DOS TO applications WINDOWS

Like me, I'm sure many of you have DOS applications that you want to port to Windows. Depending on how your program has been designed and written, you are going to find that a Windows port falls somewhere between one requiring lots of hackwork and one requiring a total redesign and rewrite.

DOS programs are usually written as though they are the only programs running, and they take total control of your machine. They sit waiting for keyboard input, and when it arrives they do some processing, maybe display or print something, and then wait for more keyboard input—effectively tying up all of your machine's resources, keyboard, screen, memory, CPU, disks, and so on. Commonly, the program is in control, and not the user.

Windows and other GUI environments differ considerably from this model. They share resources among many concurrently running programs, and they are driven by the user—not by what the analyst/programmer thinks the user wants to do. This user-driven model is termed 'event-driven programming'. Your program totally relinquishes control to Windows, and calls you when the user (or Windows) wants your program to do something. Gone are the days of sitting and waiting for keyboard input! Such events include pressing a key down, releasing a key, moving the mouse, moving or re-sizing a window, and painting a window. Most events occur through a direct user action, but some, such as timer event, occur for other reasons. When an event occurs, Windows sends your program a message identifying the particular type of event.

Each window you create belongs to a certain class of window. This provides a window with some basic foundation elements, one of which is the 'window procedure'. The window procedure is a function you write to process all messages for a particular window class. When Windows wants to send a message to a window, it looks up the window's class and sends the message to its window procedure (Windows has around 300 different messages).

Changing your program so that it works using this event-driven model is likely to be your biggest challenge. If your program has been well-designed with all keyboard input focused in a single module, and likewise screen display routines, you're in for a great deal of work. You don't call Windows and ask if a key has been pressed, it calls you when a key has been pressed.

Apart from putting the user in control, this event-driven model allows Windows to run other programs using what it



terms 'co-operative processing' or 'multi-tasking'.

Many DOS applications are character or text-based and this may be your next hurdle. Windows is a graphical operating system and does a great job of displaying lines, pixels, and so on. However, when it comes to straight text, things are probably somewhat more complicated than you are use to.

Windows treats text as graphics, and you must specify everything in pixel coordinates, not simple line and column numbers. Windows also has a wide selection of

fonts, font sizes and styles from which you can choose. The type and size of font must be used to determine the pixel location for each character. Also, Windows does not have functions to clear to the end of the line, or window, insert or delete lines, or read characters back from the screen.

These operations can all be carried out, but require extra effort. Again, if you have low-level display code sprinkled throughout your program, you're in for a lot of work.

Windows normally uses proportionally spaced fonts, and this opens up a new set of problems. Depending on your requirements, you can, however, still use fixed pitch fonts. Menus are a common way of letting the user select commands. If your program already uses pull-down menus, adapting it to Windows should be quite straight forward. Windows programs also make heavy use of dialogue boxes. A dialogue box groups together user information necessary to control some aspect of the application in a standardized fashion. It's unlikely that your DOS program uses dialogue boxes, and it will need to be altered in order to incorporate them. They are an important aspect of the common look and feel of Windows applications, and require a well-designed layout.

Windows programs should conform to the Common User Access standard (CUA) for their user interface. Detailed information on CUA can be found in the CUA Advanced Interface Design Guide, included with the Microsoft Windows SDK, available from IBM.

Windows resources allow you to bundle menus, dialogue boxes, icons, bitmaps and strings, together in one place, instead of coding them through your application. This makes support for international versions of your programs easier, and also allows someone other than the programmer to develop and maintain these resources. A resource compiler is used to compile the resources and attach them to the final executable program.

Writing

Applications with **NEW** Visual Basic for MS-DOS

CROSS-PLATFORM

PROFESSIONAL EDITION

BY

STEVE PODRADCHIK

Developers can write applications that compile for either text-mode MS-DOS or Windows by combining new Microsoft Visual Basic for MS-DOS with Microsoft Visual Basic for Windows.

The applications will look and feel similar in both operating systems—movable windows, icons, menus, controls, drag and drop, etc. Code can be written that compiles for all machines from the earliest PC/XT to a 486. The Professional Edition of VB/MS-DOS also has the power features required to create world-class MS-DOS applications such as a native 80x86 compiler, stand-alone .EXE files, 386 code generation, an integrated database engine (ISAM), and MOVE overlays. VB/MS-DOS applications can be a combination of Basic code and C, C++, MASM, or FORTRAN libraries. Microsoft Quick BASIC and BASIC Professional Development System users will be especially pleased that VB/MS-DOS runs their existing code unmodified.

The following is divided into two sections. The first section explains the VB/MS-DOS product and the second outlines writing portable applications using VB/MS-DOS and VB/Windows together.

What is VB/MS-DOS?

Put simply, the Standard Edition of VB/MS-DOS is a highly productive way to create MS-DOS applications that are easy to port to and from Windows. The Professional Edition of VB/MS-DOS goes further and adds the speed, capacity, and database access that professional development requires.

High Productivity / High Compatibility with Visual Basic for Windows

Like its very successful Windows counterpart, VB/MS-DOS offers high productivity by combining rich user interface design tools with a flexible event-oriented programming language. Standard Windows graphical elements (controls) display as text-mode equivalents. Developers use a mouse or keyboard to draw the user interface from a toolbox of the same 15 controls that Visual Basic for Windows introduced. Each control has certain properties (color, size, visible, enabled, dragmode, etc.), can invoke methods (Hide, Move, Show, etc.), and responds to events (Click, KeyPress, GotFocus, etc.). Even sophisticated user-interfaces require surprisingly little code because each control has significant built-in functionality — text boxes, edit text, scroll bars, scroll, command buttons, click, menus, pull down, and so on. Developers specify what happens when a control detects any of these events. VB/MS-DOS and VB/Windows are highly compatible therefore, because they share the same programming paradigm. VB/MS-DOS includes extensive documentation and various software tools that facilitate porting in either direction.

A multi-window, syntax-checking development environment further enhances programmer productivity. Extensive use of EMS/XMS memory and overlays makes it possible to edit and run very large applications within the

edit/debug environment. The environment can even be "tuned" by adjusting the overlay heap to trade performance for capacity. Compiled and linked code libraries written in Basic, C, C++, MASM, or most other languages can extend the VB/MS-DOS language with new functions that operate at the speed of native code. VB/MS-DOS users will also appreciate a strong set of debugging tools such as an unlimited number of breakpoints, single stepping by line or procedure, watch variables, conditional breakpoints, output and calling sequence windows. The Microsoft Source Code Profiler (included) makes performance tuning easy. VB/MS-DOS Professional also comes with the Microsoft CodeView 4.0 debugger for mixed-language debugging and tuning generated assembly instructions.

Finally, a wide variety of toolkits and sample applications enhance productivity even more. The modular nature of Visual Basic makes it easy to add these toolkits and samples into new applications and the included source code allows a developer to customize them. The Common Dialog Toolkit has fully functional, fully tested dialogs for Open, Save, Print, Find, Replace, About, and Color Picker. The Help Toolkit uses standard ASCII files to add hypertext Help to applications. The Charting toolkit includes routines to draw pie, bar, column, line, and scatter charts. The Font Toolkit combines several Bitstream fonts with rastering routines written in assembly (Additional fonts can be purchased from Bitstream). Professional installation programs are easy to create

WRITING CROSS-PLATFORM APPLICATIONS

with the Setup Toolkit. The sample applications include a notepad, a calculator and a clock. Finally, the on-line Help system includes thousands of lines of sample code that can be pasted into applications.

Speed and Capacity

Of course, productivity is most relevant where the finished .EXE files have the performance developers demand. VB/MS-DOS Pro was optimized for performance and the results speak for themselves (see Benchmark sidebar). There are many reasons for the speed, but a compiler that creates native 80x86 executables deserves most of the credit. The compiler generates 8088, 8086, 80286, and even 80386/80486 code (a first for Microsoft compilers). The compiled .EXE files can be either 100% stand-alone or can require a royalty-free runtime library.

High-speed data manipulation was another top priority. Developers using floating-point math can choose from two floating-point libraries. One is optimized for 387-equipped machines and emulates a 387 if not present. The other library is tuned for machines without a coprocessor so it performs up to 300% better than the 387/emulator library on such computers. Perhaps even more importantly, VB/MS-DOS Pro integrates a high-speed database engine (ISAM) directly into the language. One command can index up to 128MB of data or retrieve a complex record. Many third-parties also make add-on ISAMs that read/write xBASE and BTRieve files or communicate with SQL Server.

Applications are not to be constrained by 640K MS-DOS limitation. VB/MS-DOS Professional executables can be as large as 16MB because the compiler can make use of the same MOVE overlay technology that Microsoft C/C++ 7.0

introduced. Multiple overlay segments automatically swap in and out of conventional memory. MOVE determines if swaps will be to XMS, EMS, or to disk at run-time.

Writing Portable Applications for DOS and Windows

Although VB/MS-DOS is certainly a powerful DOS development tool, the single most important benefit is that it makes writing portable code relatively easy. VB/Windows and VB/MS-DOS eliminate most of the traditional problems in writing portable code by sharing the same built-in 15 control set, using the same event-oriented paradigm and employing compatible versions of Basic. Some difficulties still remain, however. These fall into four general areas: Windows vs. MS-DOS system services, custom controls and add-on libraries, graphics vs. text modes, and language differences between the two versions of Visual Basic.

Operating System Services

Windows and MS-DOS provide the developer with different built-in services. Applications that are highly reliant on operating system services will be the most difficult to port. For example, Windows applications may use DDE to exchange information. In MS-DOS, data files can replace DDE in some instances; add-on libraries can replace DDE in other applications. A VB/Windows application that uses Microsoft Excel and DDE to chart information would have to be changed to use a charting library (such as the Charting Toolkit that comes with VB/MS-DOS Professional).

Clearly, translating Windows API calls to MS-DOS could be a challenge. But consider the common Windows API calls

bit blitting, DOS functions, etc. Many of these are unnecessary in a text-mode environment or are available through the Basic language. And programmers will be surprised by some of the Windows functions that VB/MS-DOS does support such as Drag and Drop, Icons and the Clipboard. Likewise, a VB/MS-DOS application with several DOS interrupts and direct COM/LPT access can prove difficult to port to Windows. For all of these challenges, the best strategy is to avoid unnecessary operating system reliance but there are certainly places where code needs to be different.

Some simple cases can be handled in-line by checking the width of the screen at runtime (always 80 characters under MS-DOS and 9600 twips for VGA Windows) and by branching accordingly. Isolating operating-specific code into different modules is appropriate in other places. For example, a communication program developer would probably encapsulate all COM functions into procedures that reside in one module. He would develop one COM module for MS-DOS and one for Windows. The developer would just use the COM module appropriate for the target platform when making an .EXE file.

Custom Controls and Add-on Libraries

One of the most important reasons for Visual Basic for Window's success must be that the development environment has extensive custom controls and add-on libraries. Visual Basic for MS-DOS is extensible in similar, but not identical ways. Clearly, VB/MS-DOS cannot call Windows Dynamically Linked Libraries (DLLs). These should be replaced by statically linked libraries (LIB files) to gain comparable functionality. For most developers, the main problem will simply be ordering matching sets of LIBs and DLLs.

Both VB/MS-DOS and VB/Windows support custom controls but the internal structures are very different and so are not binary-compatible. As with DLLs vs. LIBs, the most serious problem to most developers will be ordering matching sets of custom controls. VB/MS-DOS Professional comes with a 48-page add-on catalog that lists all the popular database, graphic, language, and communication add-ons, as well as over a dozen VB/MS-DOS books.

Test	VB/MS-DOS Pro	Borland Turbo C++ 3.0	Borland Turbo Pascal 6.0
All times in seconds Lower is better. All tests run on Compaq 386/33.			
Elkins Factorial	6.2	5.0	5.1
Elkins Floating Pt.	2.4	4.0	4.3
File I/O	47.5	35.0	24.8
Multiply/Divide	0.7	2.0	1.8
Savage	22.3	44.0	49.0
Screen	0.8	6.0	.9
Sieve	4.0	3.0	4.3
Average Score	12.0	14.1	12.9

Graphics vs. Text Modes

The most visible difference between VB/MS-DOS and VB/Windows is that VB/MS-DOS forms are strictly text-mode for maximum speed and minimum memory consumption. VB/MS-DOS includes a form translation utility that translates binary VB/Windows forms to binary VB/MS-DOS forms and vice versa but there are other issues. The first problem is that more information fits on a VGA bit-mapped display with proportional fonts than on a 25 X 80 mono-spaced text screen. The easiest solution is to create VB/MS-DOS applications that run in the 43- or 50-line modes that EGA and VGA displays allow. The second major difference is that VB/MS-DOS cannot display graphics while forms are visible although it can draw full-screen graphics. For the most part, the same commands (LINE, CIRCLE, CLS, PSET, etc.) draw graphics in either VB/Windows or VB/MS-DOS. The only major difference, therefore, is that a developer must design a VB/MS-DOS program such that

users can toggle between graphics and forms. The new SCREEN.HIDE and SCREEN.SHOW methods facilitate this. SCREEN.HIDE temporarily hides all forms and allows full-screen graphics. SCREEN.SHOW restores the forms.

Language Differences

Finally, there are some Basic-language differences between VB/MS-DOS and VB/Windows. These are due to the fact that VB/MS-DOS is absolutely backward-compatible with existing Microsoft QuickBASIC and BASIC Professional Development System. The VB/MS-DOS language is essentially a union of the VB/Windows and BASIC PDS languages but there are a few conflicts. VB/MS-DOS includes a translation utility that handles most of these and the VB/MS-DOS manuals carefully document compatibility issues.

Conclusion

Writing applications that compile for either MS-DOS or Windows is made not only possible but easy by combining

VB/MS-DOS and VB/Windows. Although both versions exploit features of their respective operating systems, the cross-platform compatibility is high enough to yield several benefits. The most important is that developers creating MS-DOS applications today can use VB/MS-DOS to write MS-DOS applications that will move easily to Windows. Likewise, Windows developers can broaden their market to the millions of machines not using Windows. And developers who create both MS-DOS and Windows applications are in for a real treat! ♦

Steve Podradchik is the product manager for Microsoft Visual Basic for MS-DOS. Previously he worked on the Microsoft QuickBASIC and database teams and has written several vertical applications in BASIC and in other languages.



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Joan Miro, Queen Louise of Prussia. Oil on canvas. Carnegie Museum of Art, Pittsburgh.

WINDOWS DEVELOPMENT SOFTWARE

BASIC

COMPILERS

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Microsoft Visual Basic Microsoft Corporation

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Microsoft Professional Toolkit for Visual Basic Microsoft Corporation

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REALIZER

Computer Associates

REALIZER is a Complete Application Development Environment for Windows. REALIZER combines Programmable Application Tools, the FormDev visual form designer, and a structured superset of BASIC extended to access Windows object resources. Develop a complete Windows application without the SDK, quickly and easily.

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COMMUNICATIONS

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Add serial communications to Visual Basic with full hardware and software handshaking. Includes XMODEM and ASCII file transfers, and many terminal emulations. Uses standard BASIC syntax requiring minimal changes to existing programs. Requires Microsoft Visual Basic.

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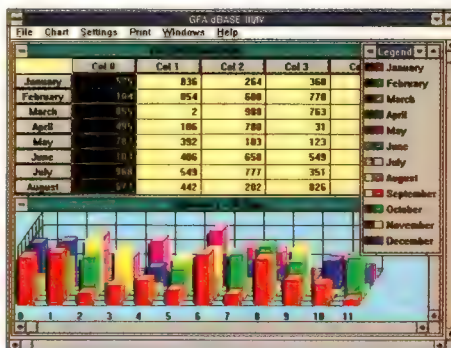
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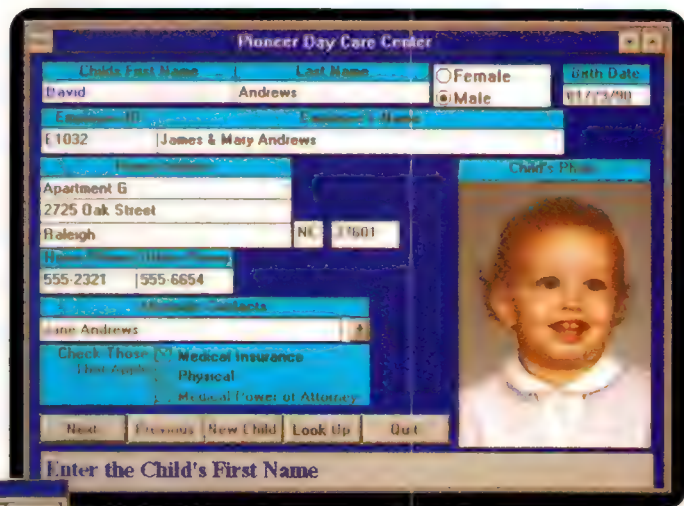
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WINDOWS DEVELOPMENT SOFTWARE

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VB Lite

TeraTech

Controls printers, access communication, sort and search arrays. Write a database application in VB using B-tree indexing. No royalties. Requires Visual Basic. Hard disk required. 1 Mb space.

List: \$125 Ours: \$109
FAXcetera #: 1972-0014 Return: F

QuickPak Professional or Windows 1.0

Crescent Software, Inc.

The most complete set of subroutines, modules, custom controls, and examples for Visual Basic. Includes complete set of financial and scientific functions, searching and sorting for all array data types, including multiple keys, fast file I/O, and much more. All low-level routines written in assembler for efficiency. Full source included. Requires Microsoft Visual Basic.

List: \$199 Ours: \$179
FAXcetera #: 1572-0014 Return: L

C/C++

COMPILERS

Microsoft QuickC for Windows

Microsoft Corporation

A completely integrated development system for the Windows environment, including a fully integrated Windows-hosted debugger. The package provides all the tools that you need to write Windows programs, including resource editors, a resource compiler, and the C runtime library for Windows. In addition, QuickC for Windows includes QuickCase-W, a graphical program designer that lets you design and generate code for a program's main window, menu bar, pull-down menus, dialog boxes, icons and cursors. Generates Windows .EXEs, Windows .DLLs, QuickWin applications, and DOS.EXEs.

List: \$199 Ours: \$139
FAXcetera #: 1269-0034 Return: L

Turbo C++ for Windows

Borland International

Creating Windows programs becomes fast and simple with Turbo C++ for Windows. Powerful, intuitive, point-and-click tools streamline Windows programming and make it simple even if you've never programmed in Windows before! The Windows IDE lets you edit, compile, and run your programs all from within Windows. ObjectWindows application framework delivers ready-made graphical user interface that you can plug right into your application with just a few lines of code. Resource Workshop lets you create great Windows resources visually, and color syntax highlighting makes it easy to read your code and spot errors. For C/C++ programming in Windows 3.0 or 3.1.

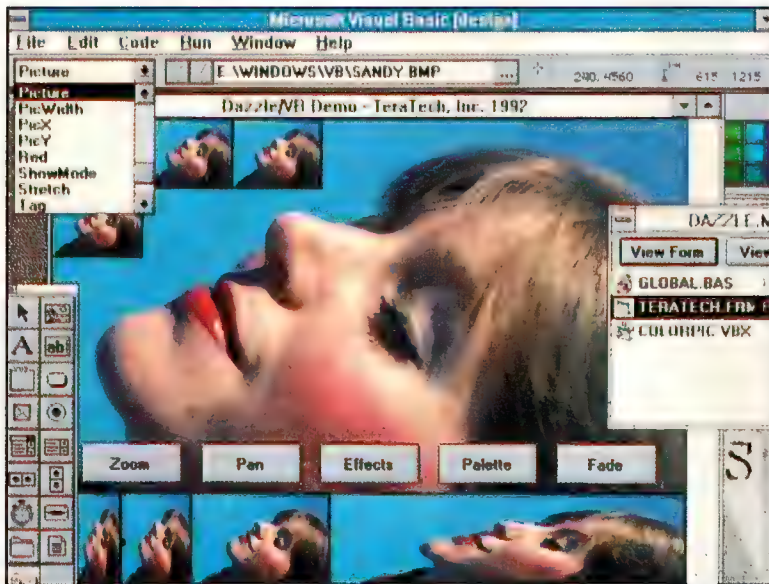
List: \$150 Ours: \$113
FAXcetera #: 1861-0026 Return: F



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BBS: (301) 963-7478

WINDOWS DEVELOPMENT SOFTWARE

CODE GENERATORS

CASE:W Corporate Edition for MFC 4.0 CASEWORKS

CASE:W Corporate Edition for MFC cuts the time it takes to learn and develop Windows applications using Microsoft's Foundation Classes (MFC) C++ class libraries. CASE:W CE for MFC includes a WYSIWYG Designer that allows the programmer to "Draw" the interface of a Windows application and generate the Windows GUI code in C++. CASE:W generates fully documented, expert level C++ code like you would write yourself. Highly recommended for developers new to Windows programming.
List: \$995 Ours: \$839
FAXcetera #: 2107-0005 Return: N

CASE:W Corporate Edition for OWL 4.0 CASEWORKS

CASE:W Corporate Edition for OWL cuts the time it takes to learn and develop Windows applications using the Borland's ObjectWindows (OWL) C++ library. CASE:W CE for OWL includes a WYSIWYG Designer that allows the programmer to "Draw" the interface of a Windows application and generate the Windows GUI code in Borland C++. CASE:W generates fully documented, expert level C++ code. This tool is highly recommended for developers new to Windows programming.
List: \$995 Ours: \$839
FAXcetera #: 2107-0005 Return: N

CASE:W Knowledgebase for C 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for OWL or MFC can expand their CASE:W product to support Windows programming in C and the Microsoft Windows C API by purchasing this add-on knowledgebase. The CASE:W C Knowledgebase enables CASE:W to generate expert level C code using the traditional C API, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0006 Return: N

CASE:W Knowledgebase for MFC 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for C or Object Windows Library can expand their CASE:W product to support object programming in C++ and the Microsoft Foundation Class Library by purchasing this add-on knowledgebase. The CASE:W MFC Knowledgebase enables CASE:W to generate expert level C++ code using the MFC class library, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0006 Return: N

CASE:W Knowledgebase for OWL 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for C or MFC can expand their CASE:W product to support object programming in C++ and the Borland Object Windows Library by purchasing this add-on knowledgebase. The CASE:W OWL Knowledgebase enables CASE:W to generate expert level C++ code using the OWL class library, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0008 Return: N

DBAPrep N Systems

DBAPrep includes open preprocessor, precompiler, DBA Tool. Supports ANSI/ISO Embedded SQL for C/C++ for multiple databases. Generates C API source for QELIB, Oracle, SYBASE/SQL Server, SQLBase, XDB, IBM ES, more.
List: \$395 Ours: \$335
FAXcetera #: 1002-0901 Return:

DBA Tool N Systems

DBA Tool generates integrity constraint RULES, DEFAULTS, INDEXES, TRIGGERS, Stored Procedures, specific DLL from ANSI DDL=, and much more. Available for DOS/WIN/OS/2, UNIX, VMS, Mac.
List: \$99 Ours: \$90
FAXcetera #: 1915-0001 Return: F

DialogCoder 3.0

The Software Organization, Inc.

Tool for prototyping dialog boxes, the primary user interface components of any application. Provides a complete development environment with a built-in dialog editor, custom controls, a sophisticated code generator and a DLL builder. Provides edit field validation, custom code support, commented source code, and a built-in test environment. Supports conditional control states, automatic code regeneration, owner-drawn controls, color, fonts and much more.
List: \$499 Ours: \$435
FAXcetera #: 2849-0001 Return: F

OWL C++ Switch-It™ Code Generation Module

Blue Sky Software

NEW PRODUCT! OWL C++ Switch-It™ Code Generation Module allows Windows MAKER Professional to generate optimized high quality C++ source code for OWL (Borland Object Windows Library). WindowsMAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the users own code is never modified by the code generator. Supports Borland C++ 2.0/3.0 & higher. Applications may be migrated across platforms and languages.
List: \$495 Ours: \$445
FAXcetera #: 2107-0007 Return: F

MFC C++ Switch-It™ Code Generation Module

Blue Sky Software

MFC C++ Switch-It™ Code Generation Module allows WindowsMAKER Professional to generate optimized high quality C++ source code for the MFC C++ class libraries (Microsoft Foundation Classes). WindowsMAKER Professional version 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the users own code is never modified by the code generator. Supports Microsoft C/C++ & higher. Applications may be migrated across platforms and languages.
List: \$495 Ours: \$445
FAXcetera #: 2602-0008 Return: F

ProtoGen 3.0

ProtoView Development Co.

NEW VERSION! The industry standard for code generation and prototyping Windows applications. Develop the user interface of

your application using Visual prototyping methods. ProtoGen generates expert level, commented code for ANSI C, Microsoft MFC C++, Borland Owl C++, Turbo Pascal, and Microsoft NT Win32. All generators included! User Code preserved from one generation to the next. It's easy and fast!

List: \$199 Ours: \$99
FAXcetera #: 2553-0002 Return: F

ToolBook 1.5 (for Windows 3.0) Asymetrix Corporation

Build custom applications for MS Windows™ 3.x more quickly and easily than with conventional programming languages. Build graphical applications such as: computer-based training, flat-file databases, database front-ends, prototypes, simulations, and interactive presentations. Includes OpenScript®, a complete, extensible object-oriented language with custom functions, DDE and DLL support. New features improve performance with rich, color graphics; optimal page display speed; large script handling; context-sensitive help; network awareness for file protection; pushbuttons and listbox fields; dialog box utility; and Windows message translation.
List: \$395 Ours: \$345
FAXcetera #: 2776-0001 Return: L

WindowsGENERATOR 3.0 Custom-Tek, Inc.

An automatic C code generator for developing user interfaces for Windows 3.x applications. It uses a high level language to specify the various elements that make up Windows environment such as application window, child windows, dialog boxes, message boxes, icons, etc. The C code generated contains "hooks" which are clearly indicated by comments,

where users can insert their codes. Supports all memory models.
List: \$199 Ours: \$159
FAXcetera #: 1000-6201 Return: L

WindowsMAKER™ 3.02

Blue Sky Software Corporation

Designed for the casual user who does not need the advanced features of WindowsMAKER Professional, but wants the same easy-to-use interface to create Windows applications in C. Generates all source and production files. No royalties. The code is commented, fully accessible and easy to maintain. Custom code is preserved during code regeneration.
List: \$795 Ours: \$716
FAXcetera #: 2602-0002 Return: F

WindowsMAKER™ Professional 4.0

Blue Sky Software™

Considered the Industry Standard Visual Prototyper and C/C++ Code Generation Tool for Developing Windows applications. New architecture uses Switch-It™ Code Generation Modules for generating ANSI C, MFC C++, OWL C++ code, among others. Design applications by simply pointing and clicking. Includes Toolbar support. Embedded dialog box editor lets you test the look & feel and make changes on the fly. TrueCode technology ensures that user code is preserved during code regeneration. Generates the Windows .EXE w/exact, expert level, fully commented C or C++ source code. CUA & SAA compliant. No royalties. "A particularly noteworthy product."—Bill Gates, CEO, Microsoft.
List: \$995 Ours: \$795
FAXcetera #: 2602-0003 Return: F



DBAPrep

- Includes Open Preprocessor, Precompiler and DBA Tool for ANSI/ISO Embedded SQL with C and C++ for multiple databases.
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- Excellent documentation and examples on how to take advantage of embedded SQL and each database platform.

DBA Tool

- Processes the CREATE TABLE stmts. to generate database specific SQL scripts to enforce data integrity constraints, WITH DEFAULT and CHECK clauses, Cross Ref. listing, Table Template Structures, C Include and # defines, and much more.
- Generates Refrential Integrity rules including cascade, restrict on update on delete and set null rules.
- Supports unique, unique clustered, normal indexes with primary, foreign, and common keys.
- Generates multiple database specific DDL from ANSI DDL. DBAPrep is available for DOS/Windows/OS/2, UNIX variants, VMS and Macintosh.

Prices starting at \$395

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N Systems, 2300 103rd Ave. NE, Suite A, Bellevue, WA 98004 (206) 450-0815

Windows NT Switch-It™ Code Generation Module Blue Sky Software

The first and only Windows NT 32-bit prototyper and C/C++ application code generator. Windows NT Switch-It™ Code Generation Module allows Windows MAKER Professional to generate optimized high quality C/C++ source code for Microsoft Windows NT. Windows MAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the user's own code is never modified by the code generator. Applications may be migrated across platforms and languages.

List: \$495 Ours: \$445
FAXcetera #: 2602-0009 Return: F

Visual SQL

Blue Sky Software
Prototyper and C Source Code generator for creating Windows SQL Database applications. Visual SQL offers the performance of compiled C code and the development speed of 4GL. Quickly generates thousands of lines of complex, easily modifiable C source code for Windows SQL database applications. Build database access right into your application as you visual design it with the powerful screen painter. Award winning preview mode lets you interactively make changes to your prototype before compiling. Visual SQL generates source code for access to the following databases (simultaneously): ORACLE, SQL Server, SQL Base, Integra SQL, dBASE files and databases supported by Microsoft ODBC.

List: \$1500-\$30,000 Ours: CALL
FAXcetera #: 2602-0010 Return: F

WinGEN 1.1

Buzzwords International, Inc.

An object oriented WYSIWYG source code generator/data entry design tool for Windows versions of dBASE, Paradox, C/C++ and Turbo Pascal. WYSIWYG Text, Buttons, and Colors, and other object properties enable creation of advanced interactive Windows database applications. OLE and DDEML links are supported and conversion of ObjectVision .OVD files to source. Available for Windows 3.1, OS/2 2.0 and UNIX X-Windows.

List: \$150 Ours: \$129
FAXcetera #: 1873-0002 Return: N

RoboHELP™ authoring tool 1.0 Blue Sky Software™

Turns Microsoft Word for Windows into a fully functional Hypertext authoring system capable of producing Windows Help files as easily as it does plain text. Guides the user through all the necessary steps—the user just fills in the actual help text when prompted. RoboHelp™ takes care of generating the H, HPJ and the complex, precisely formatted RTF files. User avoids the complexities of setting context strings, keywords, browse sequences, and hypertext links. RoboHelp™ features a customizable visual tool palette (like PageMaker). Programmers and non-programmers can develop a complete Help System under Microsoft Windows 3.x.

List: \$495 Ours: \$449
FAXcetera #: 2602-0005 Return: F

COMMUNICATIONS

**C Communication Toolkit/Windows
Magna Carta Software**
Full-featured communications library for MS-Windows development. Add

C Communications Toolkit /Windows

Now you can add professional serial communications to any C Windows application! C Communications Toolkit makes it fast and easy. You don't need to spend months writing, testing and debugging low-level device support, file transfer protocols and CRC routines.

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Not until now has serial communications been easy under Windows! C Communications Toolkit/Windows handles all the low-level interaction with the Windows driver—even in 386 Enhanced Mode! Just initialize the port and make I/O calls using functions with intuitive names like `c_putc()`, `c_printf()`, and `c_getc()`.

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Build terminal programs, file transfer routines, control modems and devices like industrial equipment and laboratory apparatus. With C Communications Toolkit/Windows the communications part of the application is taken care of.

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To send a file, takes just two function calls. One to queue the file, one to send it. And we offer the widest range of protocols:

Single file: ASCII, XMODEM, XMODEM-CRC, XMODEM-1K.

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Documentation

Over 200 functions. 600-page manual with 100 pages of Toolkit tutorial (build a powerful terminal program in easy stages). 125 pages of serial communications background and many example programs. Highly compatible with C Communications Toolkit/DOS, and C Communications Toolkit/Extended DOS.

Supports: Borland C++, Microsoft C/Quick C for Windows, Turbo C++ Watcom C. Full source code included—No run-time royalties. 30-day warranty.

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List: \$300 Ours: \$269
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LIBRARIES

POET for Windows BKS Software

The only pure Object Oriented Database management system running on DOS, Windows, UNIX and the NeXT machine starting at \$399. Your object databases have a unique identity that supports the full inheritance and encapsulation of C++. Can handle complex real world models. The database model maps directly to its storage. Supports schema evolution so extending and maintaining versions of your schema definitions is easy to do. POET's type manager supports all the C++ types as well as date, time and string, or create your own reusable customized types. The graphical browser allows you to use and navigate, analyze and modify the structure of your database schemas. Sophisticated indexing and optimized querying can quickly find any instance. Specify compiler and operating system.

List: \$499 Ours: \$469
FAXcetera #: 1000-6001 Return: L

SmartHeap™ for Windows

MicroQuill Software Publishing, Inc.
Memory management library and debugging toolkit. Provides ANSI "malloc" for C and "new" for C++. Fixes selector consumption, overhead, granularity, and fragmentation. Supports heaps and free-lists > 64K. Improves performance. Detects double-freeing, memory overwrites, leakage. 160 page manual. Source available. MBG. Formerly OptiMem from Applegate Software.

List: \$395 Ours: \$355
FAXcetera #: 9969-0002 Return: F

Out of Controls 1.0 Elect Software

Make your Windows™ applications more POWERFUL and INTUITIVE. Five DLLs including three attractive, CUA-compliant controls (Multi-cell listbox, Line-object editor, and Spinbox) plus a text editor, and model spawning libraries. Controls provide MAXIMUM FUNCTIONALITY and INFORMATION in MINIMUM DISPLAY AREA. Use DLLs in your applications ROYALTY FREE!

List: \$229 Ours: \$195
w/source: List: \$459 Ours: \$195
FAXcetera #: 1004-3101 Return: O

Full 30 day guarantee, but for source code version, source code envelope may not be opened.

Control Palette for Windows

Blaise Computing Inc.

Windows Control Palette is a collection of controls, a custom dialog class and other windows elements for building sophisticated and attractive user interfaces. Packaged as a DLL. Bitmapped push buttons, radio buttons, check boxes, "cannvases", text, toolbars, and status lines are just some of the controls provided. Supports Borland C++, Turbo Pascal for Windows, Visual Basic, the Borland Resource Workshop and requires Windows 3.0 or later.

List: \$169 Ours: \$119
FAXcetera #: 1652-0014 Return: O

Sigma NetBios Engine

Sigma Software Research

The Sigma NetBIOS Engine contains C functions to access the popular NetBIOS API standard from Windows 3.X or DOS programs. Access network name, datagram, and session services directly. Fully supports NetBIOS wait, no-wait, and post driven requests. Includes complete NCB and data transfer buffer functions. Shared DLL provides multiple application and session support. Works with NetBIOS compatible networks. Supports MSC 6 & & and MASM 5. Requires WINDOWS.TXT for DOS support. All source included.

List: \$155 Ours: \$139
FAXcetera #: 1004-8401 Return: O

zApp for Windows with Source 2.0 Development Corporation

zApp for Windows is a C++ Application Framework that frees you from the complex details of programming in MS Windows and gives you single source code compatibility with OS/2 PM, DOS and UNIX X/MOTIF. zApp's over 130 objects deliver to you Dialogs, Windows, Controls, Menus, Fonts, Graphics, Bitmaps, MDI, Printing, Memory Management, OLE, DDE, Object Persistence, and Forms. Source code included.

List: \$295 Ours: \$266
FAXcetera #: 1000-6401 Return: F

DATABASE

AceFile for Windows 2.0 Ace Software Corporation

New Version! Ace File 2.0 for Windows—Winner of the Windows Magazine 1992 Win Award is an intuitive personal data manager. AceFile provides multiple views—form, report, labels, list, mailmerge, crosstab and 16 different graphs/charts—all with colorful 3D effects and toolbars. Easy-to-build expressions and indexes—report and analyze information from multiple files. Use new or existing data (dBASE, Lotus 1-2-3, EXCEL, or ASCII Files). Network compatible.

List: \$149 Ours: \$149
FAXcetera #: 1004-1301 Return: O

Btrieve 5.10 Novell

A complete, key-indexed record manager designed for high-performance file handling and improved programming productivity. Can be accessed from any standard programming language and allow you to create applications that will run in stand-alone or distributed environments under NetWare, DOS, OS/2, or Windows. Share data with Novell's other data management products.

List: \$595 Ours: \$399
FAXcetera #: 1728-0001 Return: F

dBFAST Windows Computer Associates

The complete stand-alone dBASE/xBASE development language for MS Windows. You can create fast, powerful, easy-to-use graphical applications. Over 200 extensions to the dBASE III PLUS language and includes an interactive editor, compiler, and linker. dBFast for Windows will challenge your creativity and imagination! Design multiple windows, pull-down menus, check boxes, list boxes, radio buttons, bit-map pictures, and more!

List: \$550 Ours: \$395
FAXcetera #: 1004-0003 Return: O

C/C++ Windows 3.X spreadsheet-like ObjectTable

Multi-column table, horizontal and vertical scroll, more than 64 K data, cut and paste to clipboard, data validation, easy port to windows C++ library, supports Borland OWL and Microsoft MFC.

C object code \$79 source code \$199
C++ object code \$99 source code \$259

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P.O. Box 795908 Dallas, Texas 75379

ERwin/SQL 1.5 Logic Works

A powerful Entity-Relationship (ER) logical data modeling tool under Windows 3.0. Supports: entity, attribute, and relationship definition; primary and foreign key identification; referential integrity constraints; business rules; inversion entries; foreign and alternate key definition. Transforms logical model into physical schema and generates SQL DDL scripts for many relational systems, including DB2, Oracle, Ingres, SQL Server, Sybase, and SQL Base. Produces presentation quality graphic diagrams.
List: \$995 Ours: \$895
FAXcetera #: 2666-0001 Return: L

Essential B-Tree 2.0 for Windows South Mountain Software

Provides all the necessary tools needed to build professional Windows database programs. By implementing our functions as a DLL, you can use the B-tree library from any Windows API compatible language, such as C/C++, Visual BASIC and others. B-Tree handles all the complexity of running multiple windows that access your database and need to share the same data.
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FAXcetera #: 2089-0019 Return: L

First SQL-RDBMS FFE Software

Relational DBMS provides ANSI level 1 and DB2-compatible SQL, complete 4GL with windows facilities, direct access to dBASE files. SQL Assist menu-based query builder; DDL SQL standard language for database description; security features; referential integrity; maybe queries and context sensitive help.
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FAXcetera #: 3301-0099 Return: F

ORIN for Windows 2.4 Objective Solutions, Inc.

A complete Rapid Application Development (RAD) System for Relational Databases from Oracle, Informix, DEC and Ocolet. ORIN's powerful RAD features include Objective Solutions Graphical Query System for window design and database access, application wide data validation, formatting, triggers and an Object Oriented Procedural Language. Applications developed using ORIN can dramatically reduce development time by up to 400%. ORIN applications operate in a client/server, standalone or combination environments with no unique design requirements for any environment. Applications created with ORIN for Windows are fully transportable to all ORIN supported GUI's (Motif, CharacterBased), RDBMS's, operating systems (UNIX, VMS) and hardware platforms.
List: \$1295 Ours: \$1165
FAXcetera #: 1002-0801 Return: F

Q+E Database Library (QELIB) for Windows Pioneer Software

Now you can use your favorite Windows development tool to write your own multi-database applications. Any tool that can call a DLL (Dynamic Link Library) can use QELIB! QELIB's database API makes it possible to write one application that simultaneously accesses, queries, and edits information stored in any of these database formats: Oracle, DB, dBASE, Ingres, Sybase, SQL Server, NetWare SQL, Paradox, Btrieve, XDB, SQL Base, Excel, ASCII. Distribution agreement may apply. OS/2 version available.
List: \$399 Ours: \$359
FAXcetera #: 2625-0004 Return: F

Q+E Database Editor (Q+E), Server Database Edition for Windows 2.6 Pioneer Software

Over 2 million Windows users rely on Q+E to bring data to their desktops! Q+E can directly access, Query and edit database information stored on PCs, LANs and mainframes in fourteen (14) database formats. Then Q+E can easily integrate that data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE, Oracle, Ingres, Btrieve, OS/2 EE DBM, SQL Server, Netware SQL, SQL Base, DB2, XDB, Sybase, Excel, ASCII text files. OS/2 version available.
List: \$299 Ours: \$269
Five user license List: \$999 Ours: \$899
FAXcetera #: 2625-0006 Return: F

Q+E Database Editor (Q+E), Standard Edition for Windows 2.6 Pioneer Software

Over 2 million Windows and OS/2 users rely on Q+E to bring data to their desktops! Q+E Standard Edition can directly access, query, and edit database information stored on PCs, LANs, and mainframes in every major format. Then Q+E can easily integrate that data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE and compatibles, Paradox, Excel, .XLS files, Btrieve, and ASCII text files. OS/2 version available.
List: \$199 Ours: \$179
Five user license List: \$699 Ours: \$629
FAXcetera #: 2625-0005 Return: F

Quadbase-SQL/Win 2.0 Qse Systems, Inc.

A full featured RDBMS in the form of a DLL that supports various Windows development languages such as Visual Basic, C, C++, Toolbox, SQLWindows etc.. It fully supports ANSI level 2 standard plus extensions. The DLL can support multiple instances. It is very fast and compact. It is specially designed to manage large amounts of data efficiently. Advanced features include referential integrity, multi-user concurrency control, crash recovery, transaction processing, scroll cursor and outer join, etc.. dQuery, an award winning query tool/report writer, and VBQUERY, a Windows interactive query tool are included for you to prototype your SQL statements. 'C' programming interface is also provided together with an embedded SQL preprocessor. The underlying file formats are dBASE compatible. Ideal for small to medium sized LAN file server systems or standalone or laptop machines.
List: \$595 Ours: \$535
FAXcetera #: 1864-0003 Return: N

DOCUMENTATION

ABC Flowcharter 1.13 Micrografix

ABC Flowcharter for Windows® is the fastest, easiest and most powerful PC flowcharting program. Point and click to draw shapes. Type, and text fills shapes and annotates lines. Move shapes, and lines reroute. Simplify procedures by linking shapes to subcharts, even attach notes or code to shapes. Also includes full font support, snap grids, text search, custom shape, import, and reports. Get the best - ABC Flowcharter.
List: \$295 Ours: \$147
FAXcetera #: 2062-0007 Return: F
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software components

Spin Box Control

Tuesday, March 31, 1992

- incorporates full-function edit box
- arrows "spin" selected or default field
- includes date, time and numeric styles
- provides configurable "generic" style
- uses Control Panel date and time formats

Modal Spawning Library

- starts DOS/Windows applications and does not return until spawned application terminates
- simplifies file-based inter-application communication
- supports custom error handling

Multi-Cell List Box

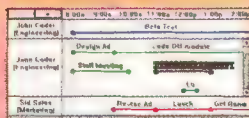
Use	Font	Bold	Italic	Underline
<input checked="" type="checkbox"/> Times Roman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Helvetica	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Courier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- checkbox, radio button and editable text cells
- rows may contain multiple cells of any type
- automatically scrolls vertically and horizontally
- allows rows to be reordered by dragging

Text Editor Library

- adds an editor to application in seconds
- provides file, print, edit, clipboard and search options
- supports file sizes up to 32K bytes

Line-Object Editor



- each object may be configured as either fixed or movable against the ruler
- each object may be configured as fixed size, resizable or split-and-rejoinable
- allows multiple category rows for sorting objects
- each row may be configured to allow objects to be dragged out to other rows, in from other rows, both, or neither
- each row may be configured to prevent object overlap
- includes time-of-day ruler
- supports customized ruler formats

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List: \$109 Ours: \$99
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RFFlow, Professional Flowcharting 2.0 RFF Electronics

RFFlow 2.0 is a professional drawing tool for flowcharts and org charts. Requires Microsoft Windows. 100 shapes auto adjust in size. Diagonal lines and curves. Auto line routing and re-routing. Click on a shape and bring up a sub-chart. Move charts to other applications via the Clipboard. Free trial disk.

List: \$129 Ours: \$116
FAXcetera #: 2353-0002 Return: F

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List: \$350 Ours: \$299
FAXcetera #: 2282-0001 Return: F

DEBUGGERS

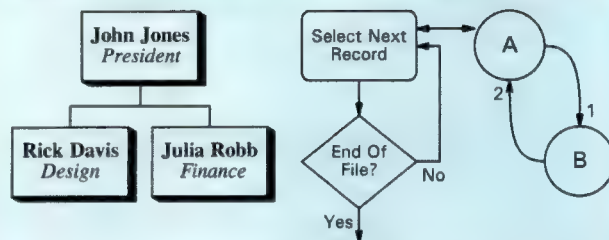
MultiScope Debuggers (for Windows and DOS) MultiScope

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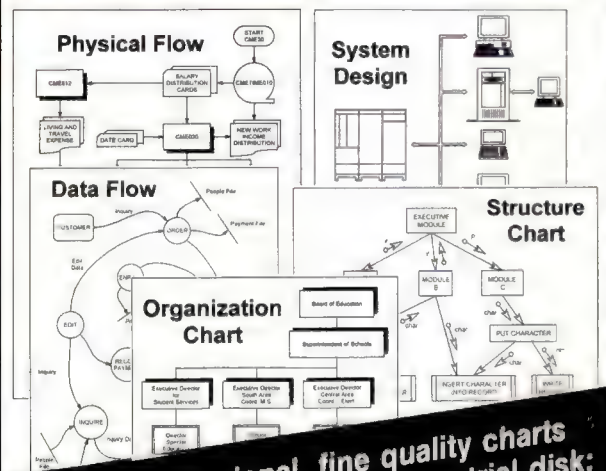
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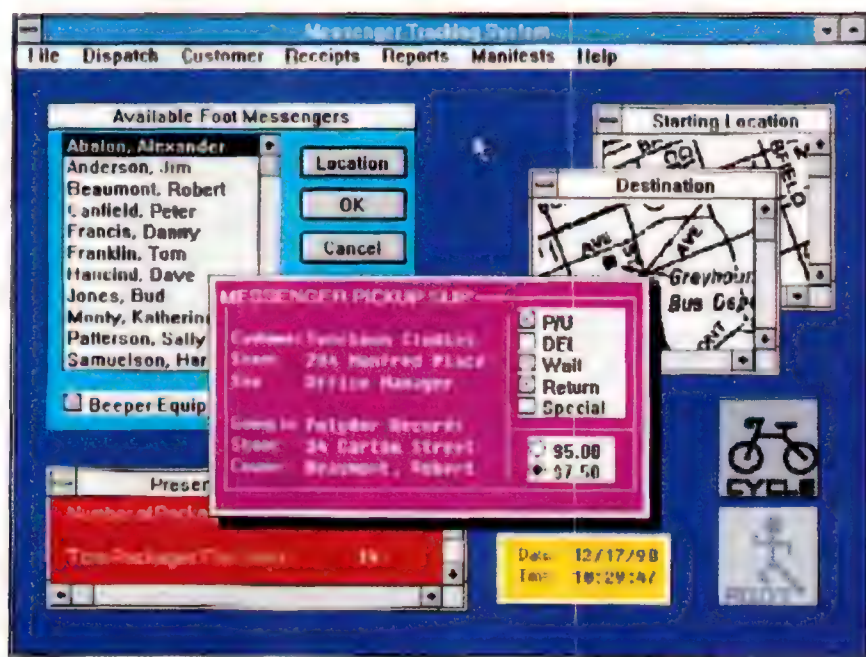
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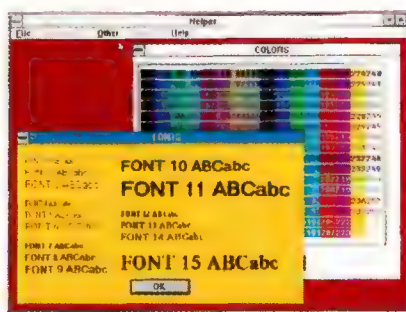
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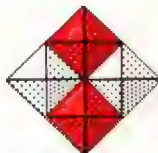
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MultiScope Debuggers for Windows for MS C/C++ 7.0

MultiScope, Inc.
The MultiScope Debuggers for Windows for MS C/C++ 7.0 provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, P-code debugging, the CommandBar for frequently executed debugging commands, character mode/Windows user interfaces with dual monitor option, Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, DLL/Multi-App debugging, 16 different program views, shows complex data structures graphically.

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List: \$379 Ours: CALL
FAXcetera #: 2575-0003 Return: L
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Periscope/32 for Windows

Periscope Company, Inc.
Offers full-screen symbolic and source-level debugging of Windows virtual device drivers, Windows device drivers, DOS device drivers, programs running in the DOS box, and other system-level software running in a Windows 3.x enhanced mode environment. Operates at the system level and is compatible with applications level debuggers such as Code View or Multiscope. Especially helpful in determining the cause of Unrecoverable Application Errors, and offers easy access to any memory location in the system. Runs on a host DOS system connected to a target Windows system with a null-modem cable. This two system method assures that the system being debugged is not altered in any way by the debugger software. Includes a break-out switch.
List: \$395 Ours: 356
FAXcetera #: 1576-0008 Return: O
May charge up to 15% restocking fee on returns. (Must be within 30 days).

EDITORS

ED, The Programmer's Editor, for Windows 1.0

Lifeboat Software
Designed for professionals and new users alike, ED, The Programmer's Editor, for Windows incorporates the best features found in other leading programmer's editors and much more. Key features include built-in code support for C++, dBASE, Clipper, and Pascal; automatic code indenting and completion; hypertext function/procedure lookups; Windows Toolbar; unlimited undo and redo; keyboard macros and remapping; and emulation of popular editors (Brief, Wordstar, Qedit, Norton). Power users will appreciate the fast C extension language, context-sensitive SDK help, LAN file locking, regular expression search, and built-in compiler support with error tracking and background compilation.
List: \$269 Ours: \$199
FAXcetera #: 0233-0011 Return: F

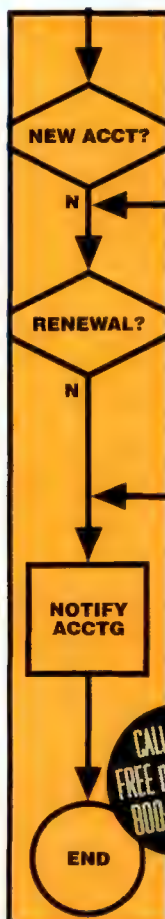
Persona for Windows 1.1

InnoVision Software, Inc.
An Integrated Development Environment that runs under Microsoft Windows 3.0 and above. Persona's fast, full-featured programmer's editor provides both CUA and BRIEF emulations, multiple file buffers, multiple tiled windows, unlimited undo and redo, regular expression search, selectable text fonts, and much more. The Persona IDE provides compile, test and debug facilities, an error tracking window, project configuration, and fast access to SDK hypertext help. Persona is full featured enough to make you leave your favorite DOS editor, but simple enough to install and configure that you will be up and running within 5 minutes.
List: \$120 Ours: \$109
FAXcetera #: 1004-2801 Return: L

FORMS

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FAXcetera #: 0020-5206 Return: O



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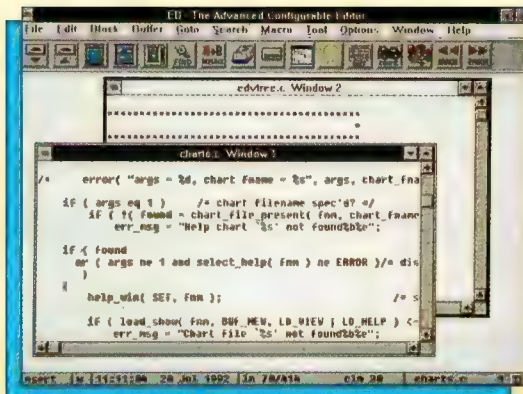
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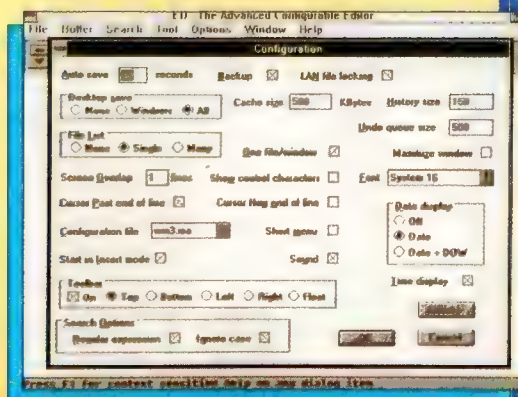
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WINDOWS DEVELOPMENT SOFTWARE

Filler/G for Windows/NewWave JetForm Corporation

Enables user to fill forms created with JetForm Design, gather data and transmit it visually, on-screen data entry facility, full data validation, complete calculations, database query, read & write. Also version for DOS/Character.

List: \$129 Ours: \$115
List: \$495 5-User Ours: \$445
List: \$1495 20-User Ours: \$1345
FAXcetera #: 0020-5207 Return: O

Merge—Windows/DDE JetForm Corporation

Use with any Windows product with DDE capabilities without leaving the application. Merge DDE extracts the appropriate data, combines it with the specific JetForm form, and prints automatically.

List: \$199 Ours: \$169
List: \$795 5-User Ours: \$675
List: \$2395 20-User Ours: \$2035
FAXcetera #: 0020-5208 Return: O

E-Mail/G Windows/NewWave / cc:Mail/MS

JetForm Corporation
Enables users to send and retrieve complex forms, designed with JetForm Design, and the data entry fields, calculations based on the value of other fields, calculations based on the value of other fields, specific routing info, and security.

List: \$495 Ours: \$420
5-User included
List: \$1495 20-User Ours: \$1269
FAXcetera #: 0020-5209 Return: O

GRAPHICS

Essential Graphics Chart for Windows V1.0

South Mountain Software
Essential Graphics Chart for Windows provides a simple to use yet powerful DLL for adding 2D and 3D charts to your Windows applications. By implementing our functions as a DLL, you can use the Chart library from any Windows API compatible language, such as C/C++, Visual BASIC and others.
List: CALL Ours: CALL
FAXcetera #: 2089-0020 Return: F

GraphiC-Win

Scientific Endeavors Corporation
GraphiC-Win is a library of C-callable routines which can be used to create publication quality scientific and engineering graphics in the Windows operating system. All of the features provided in the DOS version of GraphiC are available. (Please see listing for GraphiC.) In addition, Windows metafile and bitmap screen capture output formats are provided. No knowledge of Windows programming is required. Microsoft and Borland C compilers are supported.
List: \$495 Ours: \$449
FAXcetera #: 1468-0004 Return: L,N

LEADTOOLS DLL for Windows Lead Technologies

A dynamic Link Library for Windows developers which allows the incorporation of image compression, and other image processing into specific applications. Images can be flipped, rotated, reversed, resized, lighten/darken, and

viewed to any place on the screen. Compress with JPEG and LEAD CMP to over 200:1 ratio. Supports JPEG (JFIF, JTIF, JPG) LEAD CMP, TGA, BMP, TIFF, PCX, GIF, and more. Royalty free. Includes 30-day money back guarantee.

List: \$995 Ours: \$845
No compression List: \$249 Ours: \$213
FAXcetera #: 1005-0103 Return: F

LEADTOOLS 32 DLL for Windows Lead Technologies

An optimize 32-bit Dynamic Link Library or Windows developer. Compress and decompress images at hardware speed but in a software only solution. Images can be flipped, rotated, converted, reversed, and resized as well. Supports SPEG (JTIF, JPIF, and JPG), LEAD CMP, TGP, TIFF, BMP, PCX, GIF, WMF, EPS, and more. Compress/Decompress a 24-bit 1 meg file in 1 second (486SX-20-MZ)
List: \$995 Ours: \$845
FAXcetera #: 1005-0104 Return: F

PCX Toolkit for Windows 1.0

Genus Microprogramming, Inc
The PCX Toolkit for Windows is a Windows version of the popular PCX Toolkit for DOS. It includes over 30 functions to display, save, scale, and manipulate PCX bitmapped graphics from within any Windows program. Supports Microsoft C, Quick C for Windows, Borland C++, Turbo Pascal for Windows, Visual Basic, and any language supporting DLL's.

List: \$249 Ours: \$199
w/source: List: \$599 Ours: \$479
FAXcetera #: 1991-1007 Return: F

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An Inference Engine & library, eliminates the need to write complex dialog boxes—its controls, messages and data. Supports formatted/validated edit fields using picture masks, expanding dialog boxes, hidden and custom controls. Dialog box functionality can be changed by simply changing the rule base. No need to recompile. All dialog box constructs and styles are supported. Dialog box interface is completely portable between Windows and PM.

Windows: List: \$395 Ours: \$359
FAXcetera #: 3106-0001 Return: F

Instant Windows 3.0 WinSoft

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List: \$495 Ours: \$419
FAXcetera #: 2867-0002 Return: F

Magic Fields™ 1.0 Blue Sky Software™

Save time by creating Windows 3.x data entry screens with ready to use intelligent input fields. Magic Fields provides the data validation and range checking found only in sophisticated high-end database packages, without the database overhead

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FAXcetera #: 2602-0004 Return: F
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Zinc Interface Library 3.0 Zinc Software Incorporated

Lets you develop powerful object-oriented applications for Windows 3.0, DOS Graphics and DOS Text with one set of source code. Zinc Designer (included) uses platform-independent persistent objects to let you interactively design and save your application screens. Powerful event and window managers seamlessly integrate keyboard and mouse input with one line of code.

List: \$400 Ours: \$360
w/source: \$500 Ours: \$450
FAXcetera #: 2807-0001 Return: L

MULTIMEDIA

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Lenel Systems International
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FAXcetera #: 1005-0301 Return: L

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Multimedia Application Development Tools to integrate multimedia into applications created with any development environment that supports DLL calls. Includes all multimedia management functions: media, and device control for multimedia peripherals including analog devices; supports major animation, audio, video, graphics, and documents file and media formats; provides comprehensive multimedia database.

List: \$595 Ours: 509
FAXcetera #: 1005-0302 Return: L

PASCAL

Turbo Pascal for Windows Borland International

New Turbo Pascal for Windows 1.5 brings you all the great features of version 1.0 plus full support for Windows 3.1 as well as 3.0. Color-syntax highlighting that makes it easier to read your code and spot errors, and Resource Workshop - the great new visual resource editor. Turbo Pascal for Windows includes the Object Windows application framework so you can add a sophisticated user interface to your program with just a few lines of code. Also included are Windows CRT to convert DOS applications to Windows, a Windows-hosted development environment, and Turbo Debugger for Windows, and more.

List: \$150 Ours: \$113
FAXcetera #: 1861-0019 Return: F

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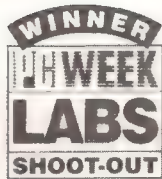
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HP has developed a network troubleshooting tool called the Network Advisor. The Network Advisor offers a comprehensive set of tools including an expert system, statistics, and protocol decodes to speed problem isolation. The NA user interface is built on a windowing system which allows multiple applications to be executed simultaneously.

NCR

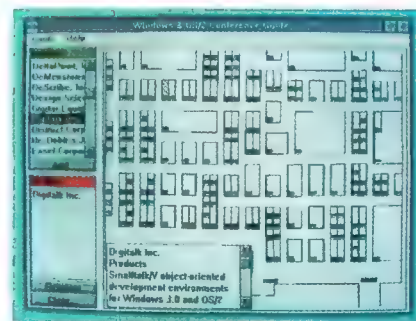
NCR has an integrated test program development environment for digital, analog and mixed mode printed circuit board testing.

MIDLAND BANK

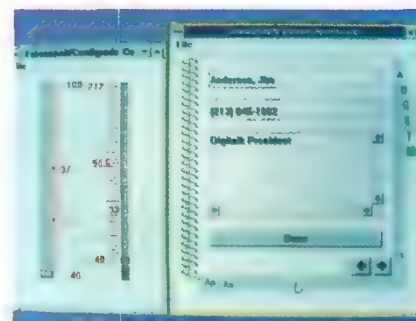
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- Extensive developer support, including technical support, training, electronic developer forums, free user newsletter
- Broad base of third-party support, including add-on Smalltalk/V products, consulting services, books, user groups



This Smalltalk/V Windows application captured the PC Week Shootout award—and it was completed in 6 hours.



Smalltalk/V PM applications are used to develop state-of-the-art CUA-compliant applications—and they're portable to Smalltalk/V Windows.

WINDOWS DEVELOPMENT SOFTWARE

RESOURCE TOOLS

ResourceSHIELD

The Stirling Group

ResourceSHIELD is a visual resource development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under MS Windows, OS/2 2.0 and Windows NT. Seven powerful resource editors provide the ability to edit sources in binary or text resource files. Allows users to translate resources between any supported platform. Over 100 ready to use, professionally designed resource templates for dialog boxes, menus, icons, and accelerators are included royalty free. List: \$149 Ours: \$129 FAXcetera #: 3106-0007 Return: F

Resource Workshop

Borland International

An integrated development tool that lets you create Windows icons, menus, bitmaps, fonts, and other resources visually without writing code. Creating Windows resources is quick, easy, and fun with Resource Workshop—you just use your mouse to point, click, and "draw" what you want. Features Borland's Custom Controls, which instantly give a sophisticated, professional look to any application. They include three-dimensional radio buttons and check boxes with the graphics and text, and dialog boxes with backgrounds that appear to stand out from the screen. Each resource created within Resource Workshop can be tested immediately without leaving the program. There's no need to exit and compile before testing a new icon, menu, etc. List: \$50 Ours: \$48 FAXcetera #: 1861-0023 Return: F

Whitewater Resource Toolkit 3.0

The Whitewater Group

The Whitewater Resource Toolkit provides C or Actor programmers a consistent way of interactively customizing Microsoft Windows applications. This essential tool lets you draw dialog boxes, color bitmaps, cursors and icons simply by selecting from a palette. The Resource Toolkit can create menus, keyboard accelerators, and string resources as easily as filling in the blanks. Compatible with all Windows resource file formats. List: \$195 Ours: \$169 FAXcetera #: 1640-0002 Return: F

SMALLTALK LANGUAGE

Smalltalk/V Windows 2.0

The industry's leading object-oriented programming environment. No runtime charges for distributing applications. Complete access to Windows specific features like DDEs and DLLs, facilitating integration with and passing data to/from Windows tools and other applications. Source code compatible with other Smalltalk/V products. Incremental Program development capability and push-button debugger simplify application development. List: \$500 Ours: \$395 FAXcetera #: 1469-0006 Return: L



FAX US TODAY!

TESTING TOOLS

Microsoft Test for Windows

Microsoft Corporation

Automate the testing of your Windows applications with Microsoft Test for Windows. It makes comprehensive testing easier, reduces testing costs, and helps you validate the quality of software as you write it, so that you can deliver better Windows applications in less time. It includes all the tools necessary to create and run automated test scripts. The test scripts can simulate keyboard and mouse input, intercept events such as unrecoverable application errors (UAEs), automatically check for correct results, and automatically log results of tests. List: \$395 Ours: \$279 FAXcetera #: 1269-0035 Return: F

SQA:Manager for Windows

SoftwareQualityAutomation

A workflow automation tool for the QA & testing process. It allows developers and test managers to automate test planning, tracking and management. Features include: standard IEEE, DOD or a Mil-spec test plan templates, comprehensive reports, relational DB, automatic data capture from SQA:Robot, an API for access to data structures for import/export of test case data, interface to third party test tools, E-mail and spreadsheets. Winner of Computer Language Magazine's 1992 Productivity Award. List: \$995 Ours: \$979 FAXcetera #: 1000-1802 Return: O Full 60-day guarantee

SQA:Robot for Windows 1.1

SoftwareQualityAutomation

Windows test execution tool for automated unattended testing of Windows applications. Records keystrokes, mouse and window events and generates Visual Basic program for playback. Test procedures and test results stored in Paradox database. List: \$495 Ours: \$449 FAXcetera #: 1000-1801 Return: O Full 60 day guarantee

ADDITIONAL LANGUAGES/PRODUCTS

DeMystifiers 1.0

MicroQuill Software Publishing, Inc.

Developed by Jeffrey M. Richter, author of Windows 3: A Developer's Guide, it is a toolset for watching Windows' internals including: message processing, global and local memory management; window class and instance management; system-wide environment settings; GDI display and device capabilities; and screen image magnification. More data and superior interface to Spy/Heapwalker/WinSight. List: \$129 Ours: \$109 FAXcetera #: 9969-0001 Return: F

Distinct TCP/IP for Windows - Software Development Kit 2.0A

Distinct Corp.

Distinct TCP/IP Software Development Kit extends the TCP/IP networking capabilities to Microsoft Windows. Includes three Application Programming Interfaces (APIs): Berkeley sockets, Remote Procedure Call (RPC) and Network Windows (NFS client). All are provided as small and fast dynamic link libraries. Coexists on the same board with either Lan Manager (NDIS) or Novell (packets). Includes data declarations for Microsoft C, Visual Basic, Borland C++ and Turbo

Pascal. Supports all Ethernet cards that use NDIS or packet drivers, including 3Com, Western Digital and others. List: \$495 Ours: \$445 FAXcetera #: 2994-0002 Return: N

InstallSHIELD™ 1.3

The Stirling Group

A full-featured installation program builder especially for Windows/PM apps. Allows you to quickly and easily build Windows 3.0 and PowerPoint like installation programs. A built-in simple install language allows you to create complete installers without any C programming. % Complete and other feedback controls built-in. High-performance data compression. Help and instruction windows. Automatically builds program groups, items and icons. Access to DLL functions for special needs. Installation logic based on hardware. List: \$395 Ours: \$369 FAXcetera #: 3106-0003 Return: F

KnowledgePro Windows 1.1

Knowledge Garden, Inc.

Use KnowledgePro to build fast, royalty-free applications. Get quick results with interactive design tools. Take control with the rich OOP language. Create smart, easy-to-use solutions with hypertext, hypermedia and built-in expert systems. Link C or C++ code with KLLs and use DDE to integrate Windows programs. List: \$549 Ours: \$379 FAXcetera #: 1474-0001 Return: F

LogSHIELD™ 1.1

The Stirling Group

A powerful, flexible session recording and playback library & API that can be linked to your application. Uses a highly efficient technique for recording all keystrokes, mouse movements & mouse clicks to individual log files for later playback. Improves upon some of the deficiencies of the Windows Macro Recorder. Also creates text mode log files for editing. Can be used for macro recording, automated regression testing, error recovery & remote diagnostics. Can be linked with all Windows/PM applications to create self-running demos. Requires Windows/PM SDK. List: \$395 Ours: \$369 FAXcetera #: 3106-0004 Return: F

MemSHIELD™ 1.0

The Stirling Group

An efficient memory manager library that eliminates memory management problems inherent in Windows/PM: Overhead, Limited Selectors, Locking & Fragmentation. Applications using MemSHIELD automatically conform to Windows Memory Management Standards and are considered "well-behaved". Allows extensive control over allocation & sub-allocation of heaps. Works with local & global memory. Allocate & free heaps based on program function/mode to substantially increase memory efficiency. Advanced memory management & reporting functions allow you to fine tune memory usage. Debugging mode allows tracking of memory problems. List: \$395 Ours: \$369 FAXcetera #: 3106-0005 Return: F

ObjectVision 2.0

Borland

The easiest way to create Windows applications. You simply draw your interface, add logic, and connect to your

data-all without knowing anything about programming. A powerful tool that combines popular features from spreadsheets, databases, forms products and front-ends into an easy-to-use WYSIWYG application tool for all Windows users and developers. Features include direct access to data (Paradox, dBASE, Btrieve, ASCII), graphical decision tree logic, DLL support, OLE, Borland's "Menus-on-Demand", and customizable menus. It is useful for many applications such as order processing, inventory management, call tracking, equipment diagnosis, etc. List: \$149 Ours: \$105 FAXcetera #: 1861-0018 Return: F

ReportRight

Management Information Sciences

The only Windows 3.0 stand-alone report and graph generator. Using ReportRight, end users of any skill level can quickly generate presentation quality reports and graphs against popular databases and spreadsheets such as Lotus, Symphony, dBASE, WordPerfect, Excel, Word, Paradox, Btrieve and more. List: \$199 Ours: \$179 w/source List: \$499 Ours: \$449 FAXcetera #: 1000-6503 Return: L

TbxSHIELD™ 1.1

The Sterling Group

A library of innovative software objects which allow you to add tool boxes to your applications. Tool boxes let users select a tool, operational mode, or an option from an array of graphical selectors. Create tool boxes of virtually any size, shape or style and advanced tool boxes such as 3D tools. Tool Box selectors can be bitmaps, metafiles, animation, icons, owner drawn & more. Developer defined procedures can be linked to each control. Powerful, flexible library allows complete control and supports all popular styles and options. Lets you add impressive and intuitive controls to your applications easily. List: \$295 Ours: \$269 FAXcetera #: 3106-0006 Return: F

ToolsKan - Field Validation 2.0

Kansmen Corporation

A tool for field format specification by means of COBOL-like Picture (PIC) statements. Examples of PIC: "(999) 999-999", and "XXXXXX". It also validates date/time/number fields. With source. (See ToolsKan set for details) List: \$149 Ours: \$127 FAXcetera #: 7119-0001 Return: F

ToolsKan - Ribbon/Icon Bar 2.0

Kansmen Corporation

3D look and feel with color customization. Integrates combobox, static text with application specified font, and buttons with toggle, radio, or push styles, using bitmap or text label. With source. (See ToolsKan Set for details). List: \$149 Ours: \$127 FAXcetera #: 7119-0002 Return: F

ToolsKan - Toolbox 2.0

Kansmen Corporation

It creates buttons from bitmaps or text. It offers a 3D look and feel with color customization, and buttons can be grouped as Multiple selection like toggle buttons. Single selection like radio buttons, and No-state action element like push buttons. Supports scrolling for large number of buttons. With source. (See ToolsKan Set for details). List: \$149 Ours: \$127 FAXcetera #: 7119-0003 Return: F



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For testing today's complex client-server, GUI applications, you need more than caffeine, cookies and a single test tool. You need a suite of automated tools that deliver higher quality programs, in less time, by supporting your overall engineering team.

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them back in high level Visual Basic scripts, requiring no further programming. Put it to work overnight and you'll find completed test reports in the morning. SQA:MANAGER then automates the analysis of those reports while providing valuable project status and quality answers to engineering or corporate management.

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WINDOWS DEVELOPMENT SOFTWARE

ToolsKan - Status Bar 2.0

Kansmen Corporation

Stretchable width fields with auto scrolled text will resize to fit. Colored progress meter showing (%) of completion. Auto text scrolling for animation. Serves as a database front-end. Date and/or time in Windows' configured internationalized format. Keyboard states in NumLock, CapsLock, and ScrollLock. With source. (See ToolsKan Set for details.)

List: \$149 Ours: \$127
FAXcetera #: 7119-0004 Return: F

ToolsKan - Table 2.0

Kansmen Corporation

Multiple row/column selections and column/row split windows. Each column can be configured as a bitmap, radio buttons, check box, combobox and set editable or display only. It can dynamically show or hide a specific columns, and change the column width. Color customization. Serves as a database front-end. It maintains a cache of the current range of data and will ask the application to supply new data. With source. (See ToolsKan Set for details.)

List: \$599 Ours: \$539
FAXcetera #: 7119-0005 Return: F

ToolsKan - 3D Chart 2.0

Kansmen Corporation

Generates 2D and 3D charts such as pie, bar, area, and line. More than 30 chart, axis and labelling styles to choose from. You can see different views of the chart by rotating about the x- or y-axis or by selecting various projection styles. Automatic y-axis rotation adds an animated touch! Can serve as a database front-end; will ask application for new

data only when needed. Supports printing, clipboard, and scrolling for long series of data.

List: \$499 Ours: \$449
FAXcetera #: 7119-0006 Return: F

ToolsKan - Bundle 1 2.0

Kansmen Corporation

A development tool kit for MS Windows. ToolsKan Bundle #1 includes five modules: Table, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation, which are custom controls designed to be used as regular Windows. All modules are written in Microsoft C 6.0 and compatible with C 7.0. It also is compatible with Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool).

List: \$899 Ours: \$809
FAXcetera #: 7119-0008 Return: F

ToolsKan - Bundle 2 2.0

Kansmen Corporation

A development tool kit for MS Windows. ToolsKan Bundle #2 includes five modules: 3D Chart, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation, which are custom controls designed to be used as regular Windows. All modules are written in Microsoft C 6.0 and compatible with C 7.0. It also is compatible with Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool).

List: \$799 Ours: \$719
FAXcetera #: 7119-0009 Return: F

ToolsKan - Complete Set 2 2.0

Kansmen Corporation

A development tool kit for MS Windows. Complete ToolsKan Set includes all six modules: 3D Chart, Table, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation. Compatible with Microsoft C/ C++, Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool).

List: \$1299 Ours: \$1169
FAXcetera #: 7119-0010 Return: F

The Windows Help Magician

Software Interphase, Inc.

An integrated help development system that simplifies the creation of help files for Microsoft Windows. The Help Magician allows developers to create, edit, import, and test the functionality of help files within the help text. Include bitmaps and all forms of hot spots. Allows the importing of ASCII text and RTF files written with Microsoft Word for Windows. Supports all Windows languages and is a must for anyone writing Windows help files.

List: \$199 Ours: \$169
FAXcetera #: 1767-0008 Return: F

Windows Workstation 4.0

Automated Design Systems Inc.

Group of tools and utilities designed to help manage windows on the network. Provides icon based menus centrally managed, print management, scripting language, network & standalone security and metering of windows applications (for Network only).

List: \$695 Ours: \$629
FAXcetera #: 2950-0001 Return: L

REXX Language

REXX/Windows kilowatt software

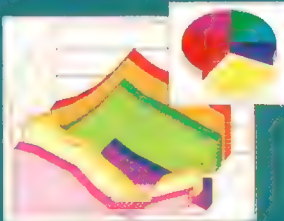
All REXX language statement and built-in functions. Windows GUI interfaces can be dynamically created by the user, or by using 100+ additional functions in REXX programs. User extensions can be added using SAA exit interfaces. Excellent for automating inter-application communications using DDE, OLE, or simpler techniques. Includes 400+ page book, online help, online examples, and Portable/REXX for MS-DOS.

REXX/Windows List: \$149 Ours: \$127
w/opt. P/H book List: \$179 Ours: \$152
FAXcetera #: 1001-4402 Return: F



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■ Table

- Column & row split windows
- Multiple row/ column selections
- Check boxes/ radio buttons/ bitmaps/ editable & combobox column
- Input Validation
- Color customization

■ Status Bar

- Auto scrolled text
- Stretchable field width
- Colored progress bar
- Show date/time & key states

■ Toolbox

- Creates buttons from bitmaps or text
- Supports scrolling
- 3D buttons w/color customization
- Single/ multiple/ no-state button groups

■ Ribbon / Icon Bar

- 3D items w/color customization
- Supports combobox, text & buttons

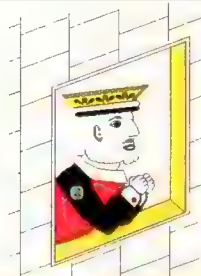
■ Field Validation

- Validates date/time/number fieldsand "PIC" statements

First Name	Last Name	City	Top Sales	Status > S&H
2	Andy	Calverton	California	<input type="checkbox"/>
3	Bob	Pressler	Massachusetts	<input type="checkbox"/>
4	Carl	Perez	Texas	<input type="checkbox"/>
5				<input type="checkbox"/>
16				<input type="checkbox"/>
17	Ben	Sperman	Michigan	<input type="checkbox"/>
18	John	White	Arizona	<input type="checkbox"/>
19	Paul	Hamblen	Colorado	<input type="checkbox"/>
20	Mark	Smwyer	Wisconsin	<input type="checkbox"/>
21	Anthony	Bradley	Illinois	<input type="checkbox"/>
22	David	Hayes	Maryland	<input type="checkbox"/>
23	John	Smith	Kansas	<input type="checkbox"/>
24	John	Jackson	Florida	<input type="checkbox"/>
25	John	Stake	Indiana	<input type="checkbox"/>
26	John	Wilson	Utah	<input type="checkbox"/>

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OPERATING SYSTEMS & ENVIRONMENTS

DESQview 386 2.4

Quarterdeck Office Systems

DESQview lets you run multiple programs at the same time. You can now print a spreadsheet, touch up a graphic in a paint program, and sort a customer list—all at the same time. DESQview works perfectly with Microsoft Windows, so you can run Windows at the same time as other non-windows programs. Also includes QEMM-386, the award-winning memory manager, so you can make the best possible use of memory for powerful multi-tasking. New version 2.4 includes enhanced support for network-specific applications. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$220 Ours: \$149
FAXcetera #: 1970-0001 Return: L

DESQview Version 2.4

Quarterdeck Office Systems

DESQview lets you run multiple programs at the same time. You can now print a spreadsheet, touch up a graphic program, and sort a customer list—all at the same time. DESQview works perfectly with Microsoft Windows, so you can run Windows at the same time as other non-windows programs. New version 2.4 includes enhanced support for network-specific applications.

List: \$130 Ours: \$115
FAXcetera #: 1970-0005 Return: L

DR DOS 6.0

Digital Research

A fully compatible operating system for all Intel-type PCs. DOS 6 is targeted at the full market of PCs: from 8088-type IBM XT's to high performance 80486 PCs. Helps DOS applications run faster, allows hard disks to store more data, provides a security system for data integrity, and is easy to use. The ease of use stems from two features: on-line help and the innovative DOSBOOK command, a hypertext, on-line manual. Additionally, data can be shared using FileLINK with other PCs over a serial cable. Fully Windows, DOS, and network compatible. Contains UNDELETE, disk caching, file compression, memory management, task switching and UNINSTALL. 80286/386/486 PC users, with more than 1MB of RAM, can access up to 628K of memory. This memory is freed by MemoryMax, DR DOS 6.0's memory management scheme. Files, buffer, network drivers, etc. are loaded out of the way into Upper Memory and High memory, freeing up to 628K. The only DOS to offer upper memory support on non-386 PCs.

List: \$100 Ours: \$59
FAXcetera #: 1024-0005 Return: L

IBM C Set/2

IBM Corporation

Includes a 32-bit SAA C Compiler with run-time libraries and a fully integrated, source level Presentation Manager Debugger.

List: \$696 Ours: CALL
FAXcetera #: 3142-0005 Return: L

IBM Developer's Toolkit for OS/2 2.0

IBM Corporation

Provides a comprehensive set of language-independent tools and code samples that are fundamental to building advanced OS/2 2.0 programs. Includes System Object Module (SOM) compiler, resource compiler with dialog box, font, and editors, kernel debug support, and more.

List: \$119 Ours: CALL
FAXcetera #: 3142-0014 Return: L

IBM Extended Services for OS/2 1.3

IBM Corporation

Offers new communications and database function and usability improvements over those offered in the IBM Extended Edition List: \$595 Ours: CALL
FAXcetera #: 3142-0011 Return: L

IBM Operating System/2 2.0

IBM Corporation

IBM OS/2 2.0 gives you the ability to run DOS, Windows, 16-bit and 32-bit OS/2 applications concurrently from a single platform. Includes a simplified yet powerful user interface with a graphical OS/2 2.0 installation procedure, an object-oriented OS/2 Workplace shell, online contextual help, online reference and tutorial.

List: \$195 Ours: \$149
Upgrade List: \$149 Ours: \$135
FAXcetera #: 3142-0009 Return: L

IBM OS/2 2.0 Technical Library

IBM Corporation

Includes programming guides and other printed references that supplement the Developer's Kit and explains how to utilize the new features of OS/2 2.0. List: \$299 Ours: CALL
FAXcetera #: 3142-0012 Return: L

IBM WorkFrame/2

IBM Corporation

Features a project organizer that allows you to easily set up, combine and associate application development projects.

List: \$90 Ours: CALL
FAXcetera #: 3142-0013 Return: L

Microsoft Windows 3.1

Microsoft Corporation

Easy-to-learn graphical environment breaks the 640K memory barrier, allowing Windows applications to access all the memory in your PC-up to 16 MB. Using icons, pulldown menus, and dialog boxes, you can

easily cut and paste between applications featuring DDE support. Automatically determines hardware configuration to optimize performance of system. Desktop applications included in package.

List: \$149 Ours: \$99
FAXcetera #: 1269-0005 Return: L

MS-DOS 5 Installation & Optimization (video)

Microsoft University

This video course consolidates all the information support professionals need to successfully install, optimize, customize, installation for multiple on a network, customize the MS-DOS 5 shell and optimize systems for best use of available memory and machine resources. Technical concepts and skills are explained by a mix of lecture, demonstration, and 3D animation. Periodic Try it Out breaks enable students to apply what they've learned immediately.

List: \$149 Ours: CALL
FAXcetera #: 1002-5401 Return: L

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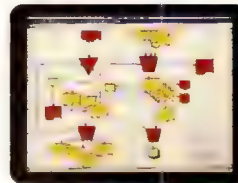


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To order, contact your local dealer. Or, for more information, free chart samples, or a demonstration disk, call us at **1-800-227-0847**. No matter how basic or complex your flowcharting needs may be, **ABC Flowcharter** will make your job simpler and more efficient. Retail price \$295.00.

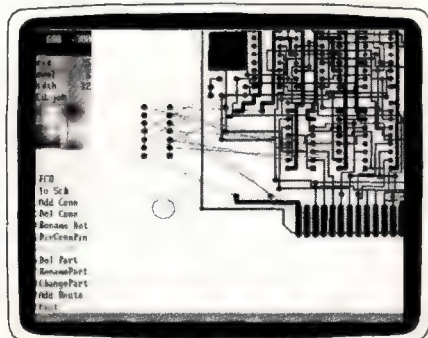


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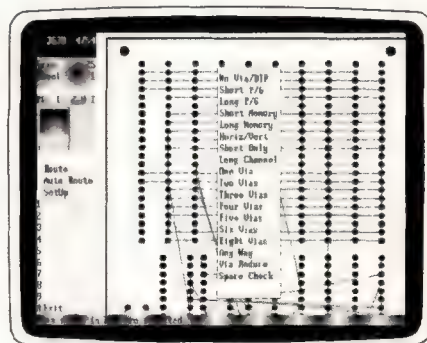
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2

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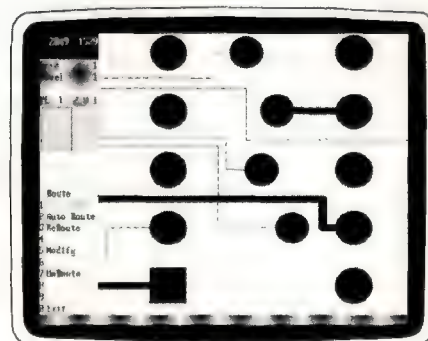
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List: \$495 Ours: \$446
FAXcetera #: 1892-0001 Return: L

SCHEMA PCB board layout OMATION INCORPORATED

Manual layout and routing package for printed circuit boards up to 32" x 32" with 30 layers. Create boards with 400+ ICs. Tracks, pads, and grids defined by user in 1 mil increments. Enter design from schematic output or on-the-fly. Over 3,500 parts library plus alternate decals. SMT both sides. Extensive design checks. Component side swap and pin swap save design time.
List: \$975 Ours: \$878
FAXcetera #: 1892-0002 Return: L

SCHEMA PCB-Options Package OMATION INCORPORATED

(Autoplace/Autoroute/Photoplot/NC Drill) Speed your PCB design. Includes Autoplacement for intelligent placement of components based upon designer specifications. Three algorithm Autorouter lets users set strategy; software checks

completed board, and optimizes for minimum length and minimum vias. Users may pre-set components and pre-route critical tracks. Options pack also includes automated output files required by Gerber Photoplotters and Excellon NC drills.

List: \$520 Ours: \$469
FAXcetera #: 1892-0003 Return: L

COMMUNICATIONS

Carbon Copy Plus 6.0 Microcom

Remote control software works over a LAN or over a Modem. When connected, the keyboards and screens of both PC's operate as if they are both attached to the host. Separate host and guest application and a LAN component are included. Features: file transfer, universal graphics translation, security, voice/data switching, screen session capture, chat utility, call table, log file.

List: \$199 Ours: \$118
FAXcetera #: 2532-0001 Return: L

Clipboard Electronic Mail System Front Line Software

Clipboard™ is a self-contained, fully-functional, stand-alone E-mail and bulletin board system. It requires MS/PC-DOS V3.3 or higher and Ansi-Sys (supplied as part of DOS) to operate. Clipboard can run on a stand-alone PC or with a variety of NetBios™ compatible LANS and supports unlimited local or remote users. It is ideally suited for use in technical support, where it can save thousands of dollars in technical support man-power cost.

List: CALL Ours: CALL
FAXcetera #: 1004-7602 Return: F

Crosstalk Mark 4 LAN Pak DCA/Crosstalk

Now, up to four people on a LAN can access Crosstalk Mark 4 at the same time with the new Crosstalk Mark 4 LAN Pak. Using a Novell IPX/SPX-based network, you simply load the software onto your server or copy it onto as many nodes as needed. An automatic counter limits the number of concurrent users to 4. Crosstalk Mark 4 features more emulations, including WYSE, HP, VT, and FTERM., DEC LAT support. Multiple sessions, IND\$FILE file transfer, high speed modem support. Queue Dialing. PC Magazine's "Editors Choice".

List: \$1295 Ours: \$799
FAXcetera #: 2744-0003 Return: L

Norton pcANYWHERE 4.5 Symantec

Norton pcANYWHERE Version 4.5 offers a wealth of enhanced features and capabilities that have redefined what remote computing software should be. Fast, reliable, and flexible, it allows any PC to access and control a DOS or Windows-based PC for remote computing and complete general communications via a serial or modem connection. New features include a Quick Connect menu option, more terminal emulations, and a powerful scripting language. Version 4.5 offers remote control of Windows in all modes, with full mouse support. Norton pcANYWHERE is the only asynchronous communications program you'll ever need.

List: \$179 Ours: \$129
FAXcetera #: 2132-0032 Return: F



Procomm Plus

Datastorm Technologies, Inc.

Procomm Plus is the most powerful communications software in the world, combining power, ease of use, and affordability. It delivers fast, efficient file transfers with 100% data integrity. You can run full-screen mainframe applications by using your PC as a remote terminal. Other features include on-line help, session logging, programming hooks, a user-sizeable re-display buffer, customizable display features, and mouse support.

List: \$149 Ours: \$134
FAXcetera #: 1118-0005 Return: L

Soft/3270

PH Technologies

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List: \$195 Ours: \$175
Prof. Version List: \$395 Ours: \$359
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GRAPHICS

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Media Cybernetics
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FAXcetera #: 1045-0012 Return: N

HALO F/X

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FAXcetera #: 1045-0013 Return: N

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FAXcetera #: 1045-0008 Return: N

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LEAD Technologies
Software only version which compress, decompress, view, convert, and resize images. Compress color or gray scale images with SPEG or LEAD to over 200 times smaller than original. File formats includes SPEL6 (FIF, JTIF, JPG), LEAD CMP, TGA, BMP, GIF, PCX, and more. Supports VGA, SVGA, Hi-color, True color and TARGA + boards. Operates as a stand alone menu program, or as a TSR. Also includes command line utilities for batch processing.
List: \$129 Ours: \$115
FAXcetera #: 1005-0105 Return: F

LEADVIEW 32

LEAD Technologies
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SHOWCAT Image Catalog 1.4

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FAXcetera #: 2989-0007 Return: N

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FAXcetera #: 2989-0005 Return: N

SUNSCAN Digital Scanware 2.2

Sun Country Software
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FAXcetera #: 2989-0004 Return: N

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FAXcetera #: 1002-5901 Return: F

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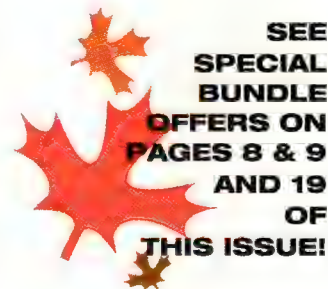
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MATHEMATICS

CtrlGauss Mod. 1 Transformation and Analysis

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CtrlGauss provides the tools to analyze and design automatic control systems. Both transfer function, and state-space representations are catered for in both continuous and discrete forms. It provides functions for building systems and displaying their characteristics for analysis. Do frequency domain design on both continuous and discrete systems using Nichols, Nyquist, Bode and Root Locus plots and simulate the results. Requires GAUSS-3861 3.0
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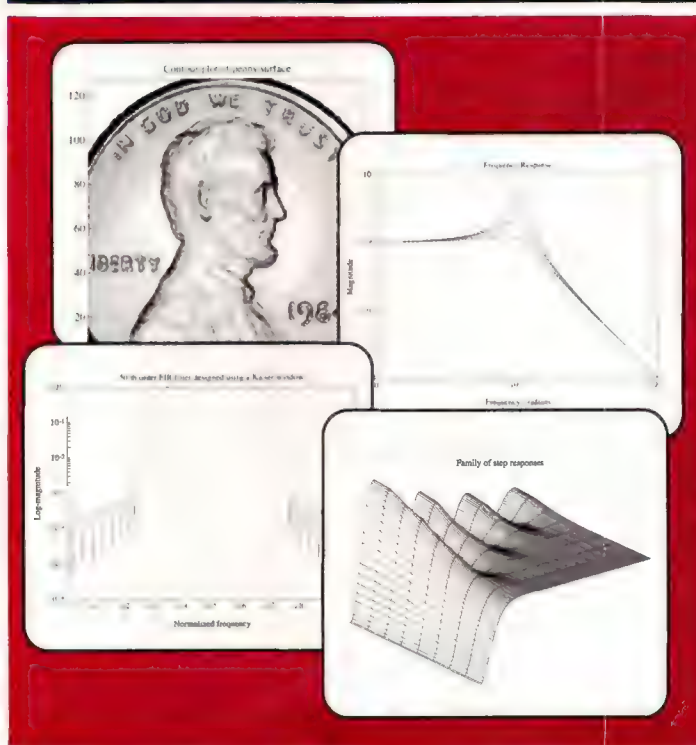
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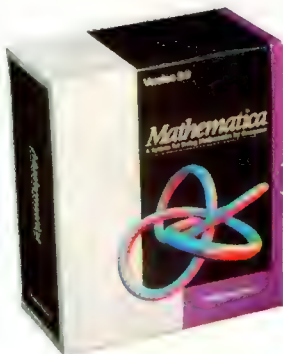
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GAUSS-386i 3.0

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FAXcetera #: 2014-0001 Return: L

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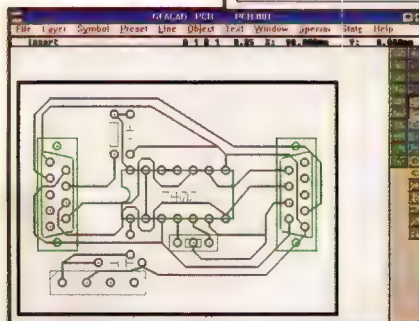
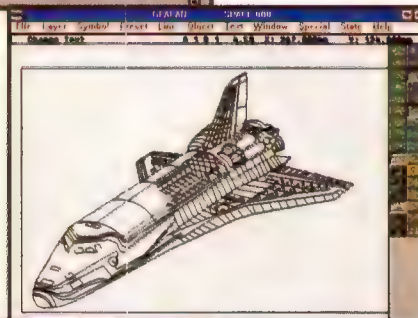
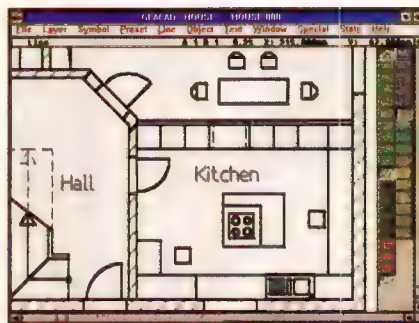
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NAPCAD/3D for Windows

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FAXcetera #: 1004-9701 Return: L

COMMUNICATIONS

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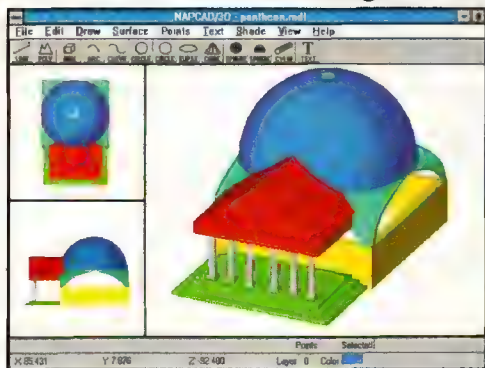
DCA/Crosstalk
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- No royalties

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List: \$199 Ours: \$169
FAXcetera #: 3183-0001 Return: F

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AT&T
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List: \$245 Ours: \$221

FAXcetera #: 1002-4004 Return: L

INFORMATION MANAGERS

AceFile for Windows

Ace Software Corporation
AceFile 20 for Windows winner of the Windows Magazine 1992 Win Award is an intuitive personal data manager. AceFile provides multiple views--form, report, labels, list, mail-merge, crosstab and 16 different graphs/charts--all with colorful 3D effects and toolbars. Easy to build expressions and indexes--report and analyze information from multiple files. Use new or existing data (dBASE, LOTUS, 1-2-3, Excel, or ASCII files. Network compatible.

List: \$149 Ours: \$149
FAXcetera #: 1004-1301 Return: O

Best Comm Software for Windows!

DynaComm for Windows boasts 15 popular terminal emulations including the new DEC VT340. It supports 7 different file transfer protocols including ZModem



and offers extensive LAN support for Novell's LAN WORKplace, DEC LAT and Pathworks, and 14 other popular network connections.

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List: \$ 695 Ours: \$ 459

CD-ROM List: \$1395 Ours: \$1256

FAXcetera #: 2079-0001 Return: N

Designer 3.1

Micrografix

Micrografix Designer 3.1 is the only precision illustration package for Windows. Snap-to grid and object snap allow precision in creating and editing technical illustrations, desktop publishing and graphic design. Prepare color separations and design with color in standard and custom gradient shapes. Designer features text-on-a-curve, up to 64 layers, WYSIWYG, high performance batch printing and import/export to word processing, graphics and desktop publishing.

List: \$695 Ours: \$497

FAXcetera #: 2062-0001 Return: L

Hijaak for Windows

Inset Systems

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List: \$249 Ours: \$189

FAXcetera #: 1976-0003 Return: L

TRAINING

Exploring Controls

Microsoft University

This video course helps experienced software developers understand how to implement controls for applications in Microsoft Windows. It explores various controls, edit controls, list boxes, combo boxes, scroll bars, and custom controls. Technical concepts are visually illustrated through 3D animation and reinforced through hands-on lab exercises and a student guide. It takes approximately 12-24 hours to complete the course.

List: \$495 Ours: CALL

FAXcetera #: 1002-5403 Return: L

Upgrading to Microsoft Windows 3.1

Microsoft University

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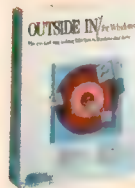
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FAXcetera #: 1002-5402 Return: L

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FAXcetera #: 1002-5402 Return: L

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IntelligenceWare

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List: \$123 Ours: \$111

FAXcetera #: 1798-0002 Return: N

WORD PROCESSING

Ami Pro for Windows 2.0

Lotus Development

The Windows-based word processor picked by users and industry experts alike as "easiest to use, easiest to learn and best overall." Has the power of serious word processors, with more practical graphics features than any other Windows word processor, such as charting, graphing and easy-to-use drawing. Tables performing basic math, DDE links, and style sheets combine with WYSIWYG display, unique dialog boxes and "Frames", to make every document look professional.

List: \$495 Ours: \$340

FAXcetera #: 4000-0012 Return: F

Word for Windows 2.0

Microsoft Corporation

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List: \$495 Ours: \$339

FAXcetera #: 1269-0004 Return: L

WordPerfect 5.1 for Windows

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DOS List: \$129 Ours: \$116

Windows List: \$129 Ours: \$116

FAXcetera #: 1001-2004 Return: F



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FAXcetera #: 0812-0001 Return: F

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Gibson Research Corporation

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List: \$89 Ours: \$79
FAXcetera #: 0812-0001 Return: F

DISK/DOS

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Micro System Designs

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List: \$79 Ours: \$71
FAXcetera #: 2897-0001 Return: F

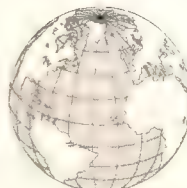
DiskDuke Pro

Micro System Designs

Includes the same features as DiskDuke, plus the following: serializes each disk by automatically searching for a user defined string and replacing it with a unique serial number; quickly makes sets of disks or customized disks, turbo charges duplication with "Track Range" which formats only the data area, supports four drives, supports the new double speed and 2.8MB drives.

List: \$179 Ours: \$155
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List: \$149 Ours: \$108
FAXcetera #: 2132-0016 Return: F

Scroll & Recall 1.7e

Opt-Tech Data Processing

A memory resident screen and keyboard utility that allows you to conveniently scroll back through data that has gone off the top of your display screen. Up to 27 screens of data can be recalled or written to a disk file (great for documenting system operations). It also allows you to easily recall and edit your previously entered DOS commands without retyping.

List: \$69 Ours: \$60
FAXcetera #: 1416-0002 Return: L

FILE COMPRESSION

Software Bridge

Systems Compatibility Corporation

Software Bridge converts more than 50 DOS and Windows word processing, database and spreadsheet files for use with your favorite word processor. Converted files retain the formatting of the original document. Software Bridge automatically recognizes unknown formats and performs the correct translation. It also supports several popular Macintosh word processing formats.

List: \$149 Ours: \$135
FAXcetera #: 1001-2002 Return: F

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Get up to 80MB on a 40 MB hard disk, 1.44 MB on a 720K floppy, or 2MB on a 1MB RAM disk—without any new hardware. It enlarges the capacity of any disk by compressing data (database, text, worksheet, font, graphic, etc.), and you're free to choose which files to compress. Unlike archive programs, Squish Plus is completely automatic and invisible. Squished files stay compacted on disk even while they're being used, and any program can use compressed files simply by referring to a new drive letter. It's totally compatible with all business and utility software: any database, word processor, spreadsheet, etc., and all backup, repair, cache, or file transfer programs. Optional encrypted passwords. Needs 36K (just 16K with EMS); runs on PCs, laptops, or DOS-based file servers.

List: \$100 Ours: \$90
FAXcetera #: 1696-0001 Return: L



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FAXcetera #: 3575-0001 Return: L

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OPTS, an easy to use file conversion utility, translates documents from Unix troff, nroff, or mm macro formatting into DOS RTF form compatible with leading word processors (Word, WordPerfect). It also converts the other way from RTF to troff (and in the same session tool). It's the only commercially available product that converts in either direction. Table conversion from troff to RTF. OPT is also available for the Macintosh and SCO Xenix. Disk sizes: 3.5 and 5.25.

List: \$179 Ours: \$152
FAXcetera #: 3397-0001 Return: L

INSTALLATION

ddb

Knowledge Dynamics Corporation
ddb (Distribution Disk Builder), is a full-screen, point-and-shoot interface program that automates the entire process of building INSTALLable distribution disk sets. Files, directories and entire directory trees may be selected with just one keystroke causes ddb to build the entire compressed distribution set for INSTALL. ddb can be purchased separately, however, it is not a stand-alone program since it must be used in conjunction with INSTALL.

List: \$150 Ours: \$129
FAXcetera #: 0026-6002 Return: F

INSTALL

Knowledge Dynamics Corporation
INSTALL is a set of tools that automates the installation of any product distributed on diskettes or CD-ROM. INSTALL is configured using a script file (which is an easy-to-learn "installation language") that gives complete, precise control over the installation process. INSTALL handles all end-user errors, reduces disk costs by compressing data, detects the target computer's environment, modifies system files, and updates prior versions. Full source code, no royalties.

List: \$250 Ours: \$215
FAXcetera #: 0022-6001 Return: F

INSTALL PRO

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INSTALL PRO is a superset of INSTALL, it includes ddb, which performs the following additional function: automatically formats disks, builds or modifies script files, compresses files, and splits large files across multiple diskettes. ddb has a full-screen point-and-shoot interface to build distribution disk sets automatically. ddb creates a configuration file

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DOS List: \$249 Ours: \$224
OS/2 List: \$349 Ours: \$315
Combo List: \$449 Ours: \$405
FAXcetera #: 2213-0001 Return: L

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Installer with extensive system/environment/network sensing. Automatic master diskette builder adds transparent CRC checking with state of the art compression ratios and speed for multi-volume disk sets. Edits system and binary files. Script language provides robust procedural control flow through internal and user-defined procedures and can run other programs. Easy generation of menus and dialog boxes. Removable copyright. No royalties or re-licensing. Specify national language.

List: \$149 Ours: \$119
FAXcetera #: 3235-0001 Return: F

INSTALLIT FOR WINDOWS

Helpful Programs, Inc.

A native Windows 3.X version of the INSTALLIT installer (See full description). Installs into program groups, shows bitmaps, edits WIN.INI, uses DLLs, and does basic screen graphics under script control to dress up your installations without source code involvement.

List: \$199 Ours: \$179
FAXcetera #: 3235-0002 Return: F

INSTALLIT MULTILINGUAL

Helpful Programs, Inc.

A version of the INSTALLIT installer (see full description which speaks English, Danish, French, German, Italian, Norwegian, Polish, Portuguese, Spanish, or Swedish as determined at master diskette build time. Easily translated into other single-byte languages (no source code involvement required).

List: \$249 Ours: \$225
FAXcetera #: 3235-0003 Return: F

InstallBoss

Kedwell Software

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FAXcetera #: 3758-0003 Return: F

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Knowledge Dynamics Corporation

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FAXcetera #: 0026-6003 Return: F

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List: \$175 Ours: \$158
FAXcetera #: 2088-0002 Return: F

wINSTALL

Knowledge Dynamics Corporation

wINSTALL is a port of the award-winning MS-DOS version of INSTALL to Microsoft Windows 3.x. wINSTALL works as a GUI, and uses DDE to add a program to the Program Manager. It will also modify .INI files and add groups and icons to the Program Manager. wINSTALL will find and execute Windows if it is not already running, and will run a text-mode installation if it can't run under Windows.

List: \$400 Ours: \$339
FAXcetera #: 0026-6004 Return: F

Power Label StrandWare

Power Label is an enhanced version of Label Master that prints any size label or form with bar codes, variable size text, lines, etc. It supports background printing to up to 4 dot matrix, laser, postscript or thermal printers at a time. PCX Graphics can now be selected from within dBASE, Spreadsheet, ASCII or DIF files to provide excellent graphical control. Design is accomplished using a mouse, which is included, and menus with graphical WYSIWYG interfaces. Text fonts and most popular bar codes can be printed at 0, 90, 180 and 270 degree rotations. Relational data file indexes and the capability to print selected records give Power Label exceptional database capabilities. Also prints batch headers, status reports and other items to help with cost accounting.

List: \$949 Ours: \$838
FAXcetera #: 2831-0004 Return: F

Quick Draw StrandWare

Quick Draw is a general purpose utility that prints lines, variable size text and over a dozen different types of bar codes onto any size label. It can also be used for printing address labels or sequentially numbered bar coded forms. Quick Draw is very user friendly with on screen layout utilizing WYSIWYG. Supports most dot matrix, laser and postscript printers with portrait and landscape mode possible on all printers. With Quick Draw, you can position any image to 1/1000 of an inch. Spreadsheet, Database or ASCII files can be imported into your label as text or bar codes.

List: \$259 Ours: \$209
FAXcetera #: 2831-0003 Return: F



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SOFTWARE DEVELOPMENT '92 FALL

WINSTALL

WHY SETTLE FOR ANYTHING LESS THAN THE BEST?

You know the limitations other Windows™ installers impose on you. You want fully generalized dialog boxes without C programming or having to create a .DLL, a powerful script language, stunning screens, state-of-the-art compression, no royalties, and full C source code. You want a program that is intelligent enough to find and execute Windows™ if it's not already running, and one that will run as a text-mode installer if it can't run under Windows™.

NOW, IT'S ALL YOURS.

For the first time ever, the power, flexibility, convenience and quality of our award-winning MS-DOS and OS/2 INSTALL is available for Microsoft Windows™! wINSTALL® raises the standards for Windows™ installation programs. wINSTALL® provides all of the above features plus an .EXE file that is complete; no .DLL files are required, and no external data compression program is required!

As an engineer you know that when reliability is a factor, the fewer executable files, the better. Of course, wINSTALL® also allows you to use DLLs to modify .INI files, and to add groups and icons to the Program Manager.

wINSTALL® normally lists for \$399.95, but, for a limited time, you can order wINSTALL® for \$100 off and also get Pop Up HyperText Help FREE (a \$49.95 value)!

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UTILITIES SOFTWARE

MEMORY MANAGEMENT

386MAX 6.0

Qualitas, Inc.

Winner of the 1991 Byte Award of Merit, PC Magazine's Editors Choice Award, InfoWorld Buyers Assurance Seal, and InfoWorld's Top-Scoring Memory Manager, 386MAX is perfect for both experienced and novice users. The new graphical interface seamlessly integrates memory management with a powerful system analyzer. After reliably recovering the most high DOS memory, your system is automatically optimized and configured for the most conventional memory. 386MAX has both ROMsearch and VGAswap and feature easy installation and optimization, a Windows-compatible disk cache, and SmartMemory.

List: \$100 Ours: \$64
FAXcetera #: 1888-0005 Return: F

386/VMM 4.0

Phar Lap Software

386/VMM is an add-in driver for 386IDOS-Extender which provides demand-paged virtual memory capabilities to Extended-DOS applications. 386/VMM allows you to run programs with memory requirements exceeding available RAM by swapping code and data out to a disk file. 386/VMM is compatible with version 2.2 or later of the Phar Lap tools, including 386IASM, 386LINK, and 386IDEBUG. Requires 386IDOS-Extender SDK.

List: \$295 Ours: \$265
FAXcetera #: 1490-0007 Return: F

AboveDISC 4.0

Above Software

Memory management utility for use on all IBM and compatible 386 machines, as

well as IBM and compatible 286 machines equipped with a NEAT chipset or EMS, EEMS, or XMA boards, or an ALL chargecard. Supports: Loading Device Drivers high (standard device drivers, as well as network drivers); loading TSR's high; extending DOS to 736K; backfilling to 640K on machines with less than 640K of conventional memory; and an extensive EMS diagnostics program.

List: \$120 Ours: \$107
FAXcetera #: 2732-0003 Return: N

Above Mem 1.0a

Above Software, Inc.

Directly accesses up to 1MB of extended memory as high speed expanded memory, specifically for 2.x versions of Lotus 1-2-3. Above Mem will also increase base memory from 640K to 736K on systems with EGA or VGA when not in the graphic mode.

List: \$80 Ours: \$72
FAXcetera #: 2732-0001 Return: N

BlueMAX 6.0

Qualitas, Inc.

Winners of the 1991 Byte Award of Merit, PC Magazine's Editor's Choice Award, InfoWorld Buyers Assurance Seal and InfoWorld's Top-Scoring Memory Manager, Qualitas memory managers are perfect for both experienced and novice users. Qualitas' new graphical interface seamlessly integrates memory management with a powerful system analyzer. After reliably recovering the most high DOS memory, your system is automatically optimized and configured for the most conventional memory. 386MAX has ROMsearch and VGAswap. And BlueMAX—the only memory manager specifically designed for the IBM OS/2—

has BIOS compression technology. Both feature easy installation and optimization, a disk cache and Smart Memory.

List: \$125 Ours: \$81
FAXcetera #: 1888-0006 Return: F

Boot Commander

V Communications

Allows you to select from up to 100 different configurations at boot time. Extremely flexible and easy to use. Even view your CONFIG.SYS and AUTO-EXEC.BAT prior to boot selection. Allows you to resolve TSR conflicts and provide the best configuration possible for your applications.

List: \$60 Ours: \$55
FAXcetera #: 1828-0008 Return: F

Dr. Switch-DevPak 2.0

Black & White International, Inc.

Allows you to swap all but 4K of Clipper, dBASE III PLUS, dBASE IV, FoxBASE+, FoxPro or Quicksilver applications out of memory. The DevPak allows you to run editors, word processors, report writers, graphics and backup utilities directly from any dBASE program. It also includes a keyboard stuffer for automating all or part of a program's operation. The DevPak can swap to EMS, XMS or to disk.

List: \$130 Ours: \$117
FAXcetera #: 1837-0003 Return: L

E-Mem

TeraTech

More memory, more speed, more fun. Allocates MegaBytes of RAM transparently using EMS or XMS from 1K to 16MB. Processes data all at once, in Extra Memory instead of disk, up to 18,000% speed gain.

List: \$99 Ours: \$89
FAXcetera #: 1972-0007 Return: F

EASISwap 1.0

Easy Automation Systems, Inc.

EASISwap enables virtually any DOS based software package to become a Terminate and Stay Resident (TSR) application. You can swap between programs with a single keystroke. EASISwap requires less than 5K and installs in just minutes. It will use expanded memory (if available) or the hard disk as needed to store programs away during swapping.

List: \$80 Ours: \$72
FAXcetera #: 2999-0006 Return: F

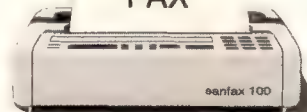
Memory Commander 2.1

V Communications, Inc.

Memory Commander gets the most out of your conventional, high and extended RAM. VGA graphics applications get up to 800K and text applications 920K of conventional DOS they can use! Quickest and easiest installation. High loads network drivers & TSRs. Video Accelerator speeds DOS functions up to 200%. MS-DOS 5.0 can get another 280K available for applications! Windows 3.0 compatible.

List: \$100 Ours: \$90
FAXcetera #: 1828-0007 Return: F

FAX



**Your Order
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MEMORY LIMEMS HMA DOS5.0 XMS BUFFERS UMB BLUEMAX QUALITAS 386MAX 486SX DRIVERS 386SX NETWORKS TSRs C&T286

The best performance in memory.

We can't remember the last time one memory manager earned as much praise from so many experts as new 386MAX® 6 from Qualitas.

Praise like the PC Magazine Editors' Choice award. The BYTE Award of Merit for 1991. And top ratings from the editors of PC Week, InfoWorld and PC Computing, among others.

But then it's easy to understand. Because



February 11, 1992
386MAX, Version 6.0

no other memory manager maximizes system performance as easily, completely and automatically as new 386MAX 6. Even if you use DOS 5. Especially if you use Windows.

There's 386MAX 6 for IBM compatible 386 and 486 systems for just \$99.95 SRP. And BlueMAX™ 6, the only memory manager that delivers up to 250% more memory on all 386 and 486 IBM PS/2s for just \$124.95 SRP.



The Intelligent Memory Managers™

© 1992 Qualitas. Qualitas, 7101 Wisconsin Avenue, Suite 1386, Bethesda, MD 20814. All company and product names are trademarks or registered trademarks of their respective owners. System Requirements: Any 386, 386SX, 486 or 486SX PC or PS/2, min. 256K of extended memory, DOS 3.0 or higher, and hard disk drive. (386MAX also supports 286 machines with Shadow RAM, or any PC with EMS 4.0 hardware with 256K memory. Feature availability and memory recovery may vary on these systems.)

LiteSwitch 1.0

Software Interphase

LiteSwitch is a utility that allows almost any DOS-based program to become a TSR. You can call up the second program with a single keystroke. When you are finished with the second program, LiteSwitch returns you to the first program right where you left off. LiteSwitch will automatically use EMS, XMS, or hard disk to save the current state of the first program. LiteSwitch uses less than 7K memory (1.5K with EMS or XMS). Also works in all text and graphic modes. Requires DOS 3.1 or later. 3.5" disks available to registered users.

List: \$100 Ours: \$89
FAXcetera #: 1767-0007 Return: F

QEMM-386 6.0

Quarterdeck Office Systems

Hunts down memory-hogging Dos Resources, TSRs and drivers and load them into High Memory (the area between 640K and 1MB), so you can use more fonts, edit bigger documents, and work faster. It's a powerful Extended and Expanded memory manager, capable of performing complex "on-the-fly" memory conversions so you don't have to manually allocate memory and re-boot every time a change is needed. Map ROM into other areas, gaining your computer up to 211K of additional High Memory (compatible with most PCs). Features a simple menuing interface and "what-if" modes to run through hundreds, sometimes thousands of combinations to decide the best memory configuration for your PC. Fully compatible with MS Windows and DOS 5, and is invaluable for increasing performance in a network environment. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$100 Ours: \$65
FAXcetera #: 1970-0002 Return: L

QRAM

Quarterdeck Office Systems

QRAM will load your TSRs, device drivers and DOS resources into High Memory (the area between 640K-1MB). You can save yourself up to 130K of memory. Use Qram's VIDRAM feature for a total savings of over 194K. Requires EMS 4.0, EEMS expanded memory hardware, or Chips and Technologies ShadowRAM (SCAT & NEAT Chip Set). Includes an enhanced, simple interface and support for more PCs. Fully compatible with MS Windows and DOS 5, and is invaluable for increasing performance in a network environment. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$80 Ours: \$49
FAXcetera #: 1970-0003 Return: L

Switch-It 3.2

Better Software Technology, Inc.

A task-switching package that allows users to switch programs (up to 100) to their EMS or hard disk, freeing up RAM space to run large applications. Easy to use! Switch-It offers automatic installation, a customizable menu, a cut & paste feature, complete network compatibility. Uses only 26K of RAM.

List: \$100 Ours: \$90
FAXcetera #: 2396-0001 Return: N

MENU MANAGEMENT

Outside In

Systems Compatibility Corporation

Outside In is a file viewing and importing utility that adds clipboard-style cut and paste to DOS. View DOS files in their original format, without the original software. Select any part or the entire file and insert the data into your current document. Outside In supports more than 60 word processing, spreadsheet and database programs.

List: \$89 Ours: \$81
FAXcetera #: 1001-2003 Return: F

PreCursor 4.1

The Aldridge Company

PreCursor is a sophisticated menu interface system that makes access to any program on the hard disk as easy as pressing a key. Unlimited menu selections, utilities, mouse support, menu cloning, built-in password security. PreCursor is network compatible, includes API support, computer usage reports, user help files and screen blanking.

List: \$99 Ours: \$89
FAXcetera #: 2810-0003 Return: F

Tree86 4.0

The Aldridge Company

A file management tool, sophisticated, yet easy to use. Network compatible. Options accessed with pulldown menus. Directories displayed in a graphic format; files can be sorted in 10 different ways. Tree86 handles 16,000 files in 2,000 subdirectories and even works across drives. Options include xcopy, tag, sort, find files, text search, archive files, kill or move directories. Includes Alt/edit a full-featured, pure ASCII editor.

List: \$90 Ours: \$81
FAXcetera #: 2810-0002 Return: F

MULTIPURPOSE

EasyShare 2.0

Adisoft, Inc.

Agent system that controls PC programs, exchanges data between applications, and combines processes. Ideal for integrating PCs with host systems. Run on top of any program or embed into C and xBase. Works with 3270, 5250, HLLAPI, Unisys, OnLan/PC, asynch, and PC programs. Minimal memory requirements.

List: \$240 Ours: \$215
FAXcetera #: 1004-3001 Return: F

Mace Utilities 1990

Fifth Generation Systems

A set of professional-quality DOS utilities that provides a fast, versatile, easy-to-use method of disk maintenance, data protection and data recovery. Speed up performance, provide complete protection and enable the user to recover from most disk disasters automatically. Features a pulldown menu system with optional user levels to make it easier to use.

List: \$149 Ours: \$134
FAXcetera #: 2490-0001 Return: F

Magellan 2.0

Lotus Development Corporation

Adds a wide range of new tools that let users find information quickly; compress files to free up more hard disk space; recover deleted files; view a wider range of files, including graphics files; and check for possible file corruption due to viruses. In addition, fully customizable, allowing users to rearrange function keys or create additional menus to accommodate their individual needs.

List: \$149 Ours: \$129
FAXcetera #: 4000-0001 Return: L

MKS TOOLKIT 3.2

Mortice Kern Systems

The MKS Toolkit provides the power and flexibility of UNIX on DOS or OS/2. The MKS Toolkit offers an abundance of utility programs which can be linked together through pipes and I/O redirection to perform complex tasks. It contains more than 150 UNIX utilities that track the emerging POSIX/FIPS standard. Includes a 260 page tutorial manual, on-line help pages, 400 pages of technical reference, disk/EMS swapping, reference cards, 16 bit compress, Windows 3.0 support, variable install, raw device support and much, much more. Some of the utilities included are: alias, awk, banner, c, calendar, cat, chdir, chmod, compress, cpio, crypt, dc, diff, ed, find, fmt, glob, grep, head, history, init, KornShell, login, m4, mailx, mkdir, more, rm, spell, tar, uname, uncompress, uuencode, uuencode, vi, wc, and who.

List: \$249 Ours: \$205
FAXcetera #: 1634-0005 Return: F

The Norton Commander 3.0

Symantec

The leading DOS manager integrates file management, file viewers, application launching, PC-to-PC file transfer and E-Mail into one simple and consistent user interface. Swiftly navigate through directories and directory trees; perform DOS operations with one keystroke or mouse click; scan the contents of data files without running the application that created them; and much more.

List: \$149 Ours: \$99
FAXcetera #: 2132-0016 Return: F

The Norton Desktop for DOS™

Symantec Corporation

The Norton Desktop for DOS is the industry's first "drag-and-drop" desktop utility for DOS-based PCs. It combines an easy-to-use, visual interface for DOS with an array of non-technical tools for the everyday user. You can run programs from a menu, print, copy, delete, view, backup and protect all your files with ease. Besides simplifying common daily procedures, Safeguards your PC with data backup, virus protection, file recovery, and hard disk optimization—all done for you automatically with just a few keystrokes or mouse clicks. Even includes colorful animated screen savers to protect your PC when idle.

List: \$179 Ours: \$129
FAXcetera #: 2132-0034 Return: L

The Norton Desktop V2.0 for Windows

Symantec Corporation

The complete file management and utilities solution for every Windows user. It's the only Windows application product that provides seamless, visual integration for faster group and file management, as well as immediate access to programs and data. The Norton Desktop also comes with a comprehensive set of Peter Norton's best utilities. Features include: Full Windows 3.1 compatibility, Norton Anti-Virus protects against over 1,000 different types of viruses, Windows text editor, network install, unlimited drag-and-drop, data recovery and emergency help, faster load time, DOS restore additional tools plus network features, and over 45 file viewers.

List: \$179 Ours: \$127
FAXcetera #: 2132-0027 Return: L

DATA EXCHANGE WITH AGENT... EasyShare 2.0

EasyShare is the perfect "secret" agent to extract and transfer data between programs on your PC. EasyShare is fast and versatile: use it as a standalone or embed it into C or Xbase programs—it will be totally transparent to your users. You can even use EasyShare as an inexpensive front-end for micro-mainframe links. EasyShare passes data from PCs to mainframes with no middleman—saving you untold amounts of time and money.

If you're building an application that needs to fetch and carry data from one source to another, or if you need to access information in other programs from your own PC, you need an agent to do your dirty work.

Try EasyShare risk-free for 30- days. If you aren't saving lots of time and money by then, return it at no cost. no questions asked. Order EasyShare 2.0 today.

System Requirements:

DOS 3.0 or higher and at least 27K of free RAM. Can be loaded into high memory with DOS 5.0, QEMM or similar utility. Will run inside a DOS window in either Windows or OS/2 and supports most mainframe emulators.

Adisoft

Adisoft, Inc.
664 Joaquin Ave.
PO Box 2094
San Leandro, CA 94577
Phone: (510) 483-5605
FAX: (510) 483-7504

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800-445-7899

Norton Utilities 6.0

Symantec

The Norton Utilities 6.0, the award-winning standard for data recovery and protection, helps you safely recover more lost data than any other program. Version 6.0 is fully compatible with DOS 5.0 including DOS 5.0's new memory manager and Task Switcher. Speed up your hard disk with a faster Norton Cache and a four times faster Speed Disk. Includes NDOS, the ultimate DOS enhancer, for essential DOS improvements while reducing the amount of memory DOS requires. The Norton Utilities fully supports networks and Windows.

List: \$179 Ours: \$115
FAXcetera #: 2132-0017 Return: F

Outside In for Windows

Systems Compatibility Corp.

Outside In for Windows is a file viewing and data import utility. Use it to copy data from 90 word processing, database and spreadsheet formats to the Clipboard with formatting intact. It also prints files and launches applications. Use it as a stand-alone utility or as part of Norton Desktop, Windows 3.1 or the major word processors. Outside In supports DOS, Windows and Macintosh files.

List: \$89 Ours: \$81
FAXcetera #: 1001-2001 Return: L

PC Tools™ Deluxe 7.1

Central Point Software

A powerful but easy-to-use collection of data recovery, hard-disk backup, DOS shell, and desktop management programs. Includes the DiskFix disk repair program, more than 30 file viewers for popular applications, optional write caching, and support for a wide variety of tape-backup systems. Runs on IBM PCs and 100% compatibles with DOS 3.0 or higher and 512K of memory.

List: \$179 Ours: \$129
FAXcetera #: 1529-0007 Return: F

View-It 1.4

V Communications, Inc.

View-It is a zoomable high speed file viewer, capable of display up to 160 columns and over 100 lines depending on your EGA/VGA equipment. It accepts files of any size. View-It provides advanced fast searching, with wildcard support, and multi-file searches. Includes graphic scroll bar and mouse support. Written entirely in assembly for very fast performance.

List: \$70 Ours: \$65
FAXcetera #: 1828-0004 Return: F

NETWORKING

ARCmonitor+ & Emonitor+

The complete software diagnostic tools that troubleshoot errors, hardware failures, and traffic overloads on your ARCnet or Ethernet LAN. Determine if your network is overloaded by viewing the packets/sec being transmitted on an easy to read graphic screen. Check the integrity of your network cable to verify network connections. View bandwidth utilization to see how network capacity is being used. Asynchronous communication features allow you to do all your LAN troubleshooting via modem from anywhere.

ARCmonitor+ List: \$295 Ours: \$235
Emonitor+ List: \$295 Ours: \$235
FAXcetera #: 2938-0005 Return: L

DISTINCT TCP/IP for Windows-Software Development Kit

Distinct Corporation

DISTINCT TCP/IP for Windows-Software Development Kit extends TCP/IP networking capabilities to Microsoft Windows. Windows developers can write TCP/IP network applications, or distributed applications using RPC/XDR such as a front end to a UNIX database. It includes three APIs: Berkeley Sockets, Remote Procedure CALL (RPC) and Network Windows (NFS Client). All are provided as VERY SMALL DLLs that run in all three Windows modes. Coexists on the same board with LAN Manager (NDIS) or Novell (packets).

List: \$495 Ours: \$446
FAXcetera #: 2994-0002 Return: N

DISTINCT TCP/IP for Windows-Network Applications 2.2

Distinct Corporation

DISTINCT TCP/IP Network Applications give you TCP/IP connectivity without consuming your DOS memory. Multiple concurrent Telnet sessions, drag and drop file transfer (FTP) and more. You can even drop remote files onto a local printer! Ping and other utilities included. Optional Developers toolkit for TCP/IP, RPC, Telnet, FTP and NFS available.

List: CALL Ours: CALL
FAXcetera #: 2994-0003 Return: N

LAN Automatic Inventory

Brightwork Development

A complete configuration system that automatically creates a LAN equipment database including both hardware configuration and software application information for workstations and file servers. It detects over 1700 software titles on local and network hard drives and identifies specific software versions. Keeps track of number of copies of each software package and allows users to customize additional software titles. Supports consolidation of data from multiple servers and sites. Brightwork's LAN Automatic Inventory is the only network-based solution that supports both PC and MAC hardware and software products.

List: \$695 Ours: \$455
FAXcetera #: 2938-0006 Return: L

LAN Support Center

Brightwork Development

Brightwork's practical "help desk" software is a real-time maintenance and alerting system for LAN managers. LAN Support Center gives you instant access to user and hardware information, making it easier to answer support calls quickly and effectively. Easily track your support efforts with relational databases that combine equipment records, user records, alerts and trouble tickets. Customizable checklists allow you to set procedures. Server Watch feature, available 1st quarter '92, monitors critical file server activity and alerts you to significant changes.

List: \$595 Ours: \$389
FAXcetera #: 2938-0007 Return: L

NETremote+

Brightwork Development

NETremote+, Info World's top-rated LAN Communications product, is the indispensable support software that lets you see user's screens on your screen and control their PCs with your keyboard. NETremote+ provides superior diagnostic capabilities, so you can check on server connections, LAN adapter and IPX

statistics, programs in memory and other vital data. Provides both dial-in and on-LAN PC control. The most comprehensive remote access and support software available. Full windows 3.0 implementation will be available 1st quarter '92.

List: \$350 Ours: \$229
FAXcetera #: 2938-0001 Return: L

PS-Print

Brightwork Development

With PS-Print, PC Week's top-rated LAN printing solution, all your users can have easy access to all the printers on your LAN—wherever they're located. This complete LAN printing system dramatically improves printing speed on NetWare and simplifies printing access. Prints graphics more than 10 times faster than NetWare RPrinter. PS-Print includes QueueIT!, a pop-up printer selection menu that lets users choose printers without exiting their programs. Takes full advantage of the high-speed performance and benefits of HP LaserJet III series printers.

List: \$395 Ours: \$259
FAXcetera #: 2938-0003 Return: L

SiteLock

Brightwork Development

SiteLock provides software license metering, virus protection and software execution control for NetWare LANs. Limits concurrent use of software to ensure compliance with license agreements. Locks users out when all legal copies of software are in use. Verifies protected files before allowing execution by performing bit-by-bit check against a registered copy of the file. Prevents altered, unauthorized or possible infected software from running. Fully compatible with Microsoft Windows 3.0.

List: \$495 Ours: \$325
FAXcetera #: 2938-0004 Return: L

OPTIMIZING

Cache86 4.0

The Aldridge Company

Cache86 is the fastest, safest, most memory efficient disk cache program. Increase productivity - Cache86 speeds up data transfer. Write back and write through are available at the user's option. In expanded memory, a 4 meg cache can use as little as 1K of conventional memory. Includes benchmark program to measure system performance and memory map utility.

List: \$50 Ours: \$45
FAXcetera #: 2810-0001 Return: F

NetOptimizer 2 V1.00

Ontrack Computer Systems, Inc.

NetOptimizer software is the premier file server organizer, designed to reduce access time, increase productivity, and aid data recoverability. NetOptimizer software will defragment files, arrange them into zones, and guard your valuable network data while reorganizing.

List: \$395 Ours: \$356
FAXcetera #: 0850-0007 Return: F

NOW!

TeraTech

Accelerates reading from and writing to hard disks and diskettes, adding life to hard drives and diskettes; makes the most of extended, XMS or expanded (LIM/XMS) memory by eliminating redundant disk activity, and can be adapted to any special need.

List: \$89 Ours: \$80
FAXcetera #: 1972-0013 Return: F

SCREEN SAVERS

After Dark for Windows

Berkeley Systems

Save your screen with over 40 incredible displays—2.0 features 5 Brand New Displays, Digital Sound, True Color Graphics, WallZapper (instantly turns an After Dark display into Wallpaper), Network Password Support, new fish, and MultiModule! Also DIS blanking to black and password protection.

List: \$50 Ours: \$28
FAXcetera #: 3025-0001 Return: F

More After Dark

Berkeley Systems

Offers more than 25 add-on displays for After Dark. Including Mowin' Man, Tunnel and Graphstat. Virex-D virus detector module from Microcom, maker of Virex, scans for viruses while After Dark sleeps. Lunatic Fringe game module. Beautiful new Fish! to restock your fish tank.

List: \$40 Ours: \$28
FAXcetera #: 3025-0002 Return: F

SECURITY

Data Security Plus

PC Guardian

Data Security Plus is a comprehensive security software package offering data protection and anti-virus prevention, detection and removal capabilities. It is comprised of six modules, each offering different security features. Choose from the following to create a security system to meet your specific needs: Access control (required), program approval and automatic virus scanning, directory locking, audit trail, DES Encryption, and forced backup.

List: CALL Ours: CALL
FAXcetera #: 2333-0001 Return: N

Dolphin Encrypt 1.60

Dolphin Software

Dolphin Encrypt encrypts and decrypts files and floppy disks using an 8-60 character key. It can encrypt multiple files specified via wildcard characters and size or type of file. Files are compressed during encryption, output can be binary or text. Can be run from a batch file. Encryption is fast and highly secure, with output indistinguishable from random bytes.

List: \$195 Ours: \$176
FAXcetera #: 3019-0003 Return: L

HardLock Computer Security

Sentry Software Corp.

HardLock 3.0 Computer Security secures your computer from intruder and unauthorized personnel access, plus provides access restriction for up to 5 authorized users. Restrictions include supervisor-defined limited access to serial ports, printer ports, floppy drives and hard drives. In addition, HardLock is the only computer security that has built-in boot virus protection. It also has a variety of other beneficial features.

List: \$49 Ours: \$41
FAXcetera #: 1004-8101 Return: F

For FAXcetera®
instructions
See page 176

SAFE AND SECURE.

It's what we all want to be. And you do your best to make sure that your family, your home and other valuable possessions are indeed safe and secure.

But what about your computer? And the valuable information that you keep in it? Truth is, just about anyone can have access to it if your computer is not secured by **HARDLOCK**.

In fact, studies show that even in the most secure offices unsecured computers are still vulnerable to intruders. People such as cleaning personnel, mailroom clerks and others still have easy access to your computer, even if it has a key lock or power-on password.

Pull the Plug on Unauthorized Access

Now you can put a stop to all intrusions and unauthorized access by securing your computer with **HARDLOCK 3.0**, the computer security of choice by Fortune 100 companies and the U.S. Government.

No clumsy hardware to install. No complicated procedures to follow. And absolutely no danger of losing valuable programs or files. Just install using the simple installation utility provided, select your password, and you're on your way.

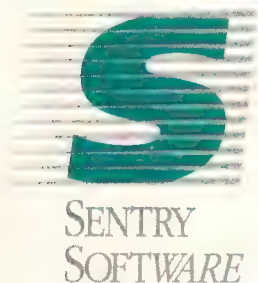
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FAXcetera #: 1005-0501 Return: L

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FAXcetera #: 1004-5001 Return: L

FaxRight

Management Information Sciences
FaxRight for Windows allows end users to send faxes directly from any Windows

Application, as well as receive faxes in the background, schedule fax transmissions, export fax images and view and print faxes. The program uses integrated, dBASE compatible phone books. Supported fax modems are EIA TR-29.3 Class II and EIA 578 Class I standards, as well as many fax modems that use Sierra SendFax protocol.
List: \$149 Ours: \$129
FAXcetera #: 1000-6501 Return: L

SuperFax for Windows 5.0

Pacific Image Communications, Inc.
A fax communications software that supports EIA Class 2 and CAS boards. Together with these fax boards, the software allows users to fax directly from their Windows applications. Has DDE capability that lets users establish direct communication between their application and SuperFax. Available in single user and network version.
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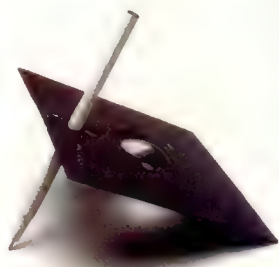
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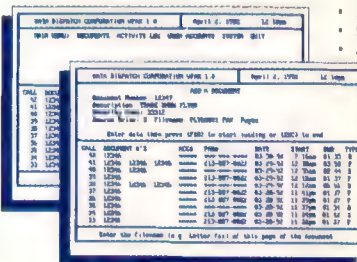
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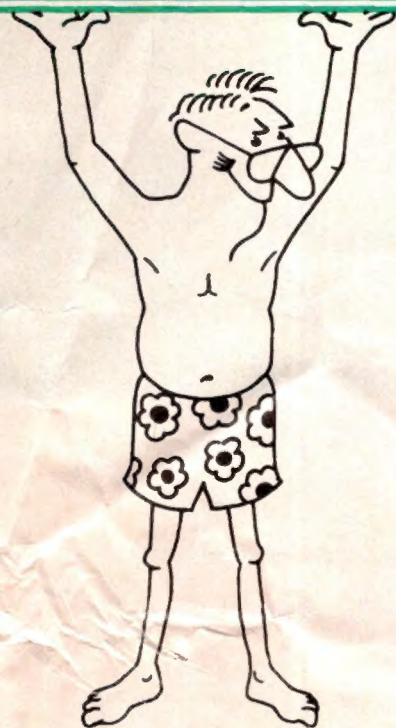
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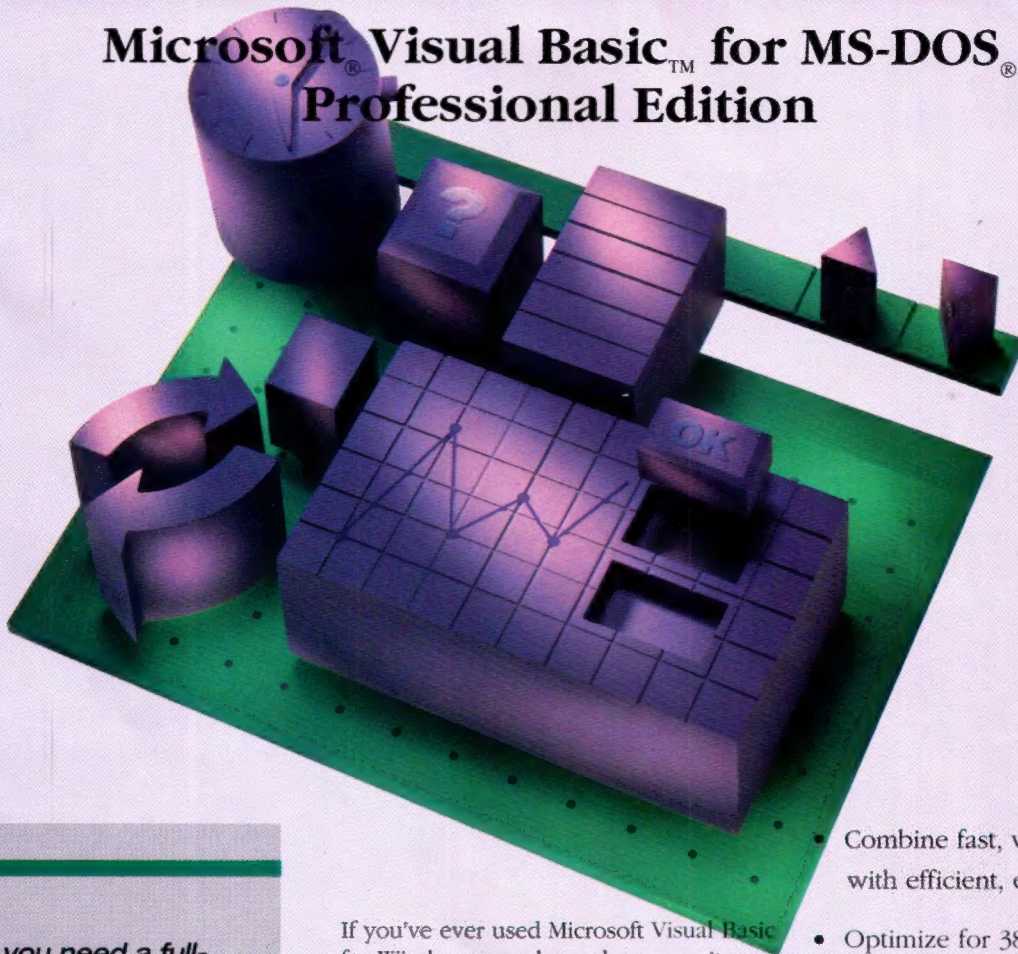
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